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ABSTRACT

The educational materials in this resource guide were developed from information collected from the 1991 and 1994 Festival of American Folklife programs held at the National Mall in Washington, DC. The festivals were held in connection with the 500th anniversary of Spanish contact with the Americas and were celebrations of the diversity and persistence of "America's First People." The guide provides an opportunity for teachers and students to learn how native cultures in North and South America have sustained themselves through unique partnerships with their environments for thousands of years. It features cultural groups who came to the festivals from three geographic areas the Hopi of northern Arizona; the Tlingit, Tsimshian, and Haida of southeast Alaska; and the Aymara and Quechua of the Peruvian and Bolivian Andean regions. Materials in the guide support four primary learning goals: to deepen students' understanding of Native American cultures and respect for cultural differences; to teach young people about traditional Native American relationships with the earth and its ecosystems; to teach young people about the importance of stewardship of the earth and its resources; and to help students become skilled at observing, analyzing, and reporting the characteristics of cultural groups. The guide contains informative essays, suggestions for teachers, student activities, and many resources. Following an introduction, the guide is divided into "Knowledge of the Land"; "Art and Identity"; "The Power of Stories"; "Ritual and Ceremony"; "Stéwardship and Reciprocity"; and "Resources." The resource section features works consulted, suggested references, and a slide set. (BT)

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LAND AND NATIVE AMERICAN CULTURES

A Resource Guide for Teachers

Readings, Activities, and Sources

Grades 9-12

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The Smithsonian Institution

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Washington, D.C.

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A Resource Guide for Teachers
Readings, Activities, and Sources
Grades 9-12

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INTRODUCTION

In the summer of 1991, seventy representatives of thirteen Native American communities gathered on the National Mall in Washington, D.C., to participate in the 1991 Festival of American Folklife. Sponsored by the Smithsonian Institution Center for Folklife Programs & Cultural Studies, the "Land in Native American Cultures" program at the Festival was one of several events held in connection with the 500th anniversary of Spanish contact with the lands and people of the Americas.

This Festival program was a celebration of the diversity and persistence of America's First People. Traditional practitioners of subsistence activities, art, music, dance, narrative arts, healing, and foodways shared their knowledge with more than one million people. Festival-goers had the opportunity to hear from members of Native American societies that have persevered for more than 500 years since contact, maintaining traditional knowledge of the earth and of their cultures. Each group demonstrated subsistence practices uniquely suited to specific environments as well as artistic and spiritual traditions that underscore the group's unique identity. Many participants in the 1991 "Land in Native American Cultures" program returned to Washington as participants in the "Culture and Development in Latin America and the Caribbean" program of the 1994 Festival of American Folklife.

Today, as in 1492, concepts of land shape the political, social, economic, and symbolic lives of Native Americans. Today, as in 1492, knowledge of the land as a sustainable resource and as a spiritual force

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provides these groups with their greatest hope for economic self-determination and continuation of ancient traditions. For hundreds of years, this knowledge has been largely ignored or ridiculed by non-Native peoples. Now, as we are confronted by the dire condition of the earth's natural resources, and each of us is challenged to act on our responsibility to tend them, events such as the 1991 Festival of American Folklife program provide opportunities to learn to live as caretakers of the earth.

Development of educational materials from the rich information collected for and during the 1991 and 1994 Festival programs provides an opportunity for teachers and students to learn how Native cultures in North and South America have sustained themselves through unique partnerships with their environments for thousands of years. These materials feature cultural groups who came to the 1991 and 1994 Festivals from three geographic areas — the Hopi of northern Arizona; the Tlingit, Tsimshian, and Haida of Southeast Alaska; and the Aymara and Quechua of the Peruvian and Bolivian Andean regions. Informative essays, suggestions for teachers, student activities, and recommended resources provide materials for learning how these groups' intimate relationships with the land are manifested in subsistence practices, art, ritual and ceremony, and verbal arts.

These materials support four primary learning goals:

- to deepen students' understanding of Native American cultures and respect for cultural differences;
- to teach young people about traditional Native American relationships with the earth and its ecosystems;
- to teach young people about the importance of stewardship of the earth and its resources;
- to help students become skilled at observing, analyzing, and reporting the characteristics of cultural groups.

These goals are addressed through four instructional topics:

KNOWLEDGE OF THE LAND is a presentation of the concept of subsistence as it applies to the knowledge, practices, and values exhibited in the lives of several Native American groups from diverse geographic areas.

ART AND IDENTITY explores how knowledge of natural resources is applied to the unique art of each culture and investigates the practical, aesthetic, and spiritual roles of art and craft objects.

THE POWER OF STORIES demonstrates the role of stories and oratory in communicating and preserving cultural knowledge and values.

RITUAL AND CEREMONY explores the sources and functions of rituals and ceremonies, their connection to subsistence activities, and their role in communicating and preserving Native beliefs and values.

Presentation of each of these topics is organized in a format which includes a *Teacher Preparation* essay providing background information about the topic followed by *Suggested Activities* designed to actively involve students in exploring new concepts. *Focus Questions* for each topic are designed to help students direct their thinking as they are presented with new information. Then information for student use is provided. Teachers may assign these sections as student reading or adapt them for other forms of presentation, depending on the particular needs of students. These sections are interrupted with **TIME OUT** activities designed to give students opportunities to recall prior knowledge, reflect on what they have learned, and actively apply new information. A list of *Suggested Resources* can be found at the end of each unit of study.

This guide will be useful for teaching about specific cultures as well as introducing students to the various disciplines involved in observing and describing the traditions and beliefs that make each culture unique. Activities are designed to involve students as folklorists, historians, anthropologists, geographers, and practitioners of other

In preparing these materials, we have made every effort to treat each topic with respect and to honor each group's right to maintain the privacy of its sacred traditions. In their collections of Native American stories and nature activities, authors Michael J. Caduto and Joseph Bruchac include a list of suggestions for teaching about Native cultures with respect and appreciation. Some of their suggestions are:

- **Don't discuss Native American cultures as if they only existed in the past.**
- **Do discuss that Native Americans live in the modern world. They work at jobs, go to school, play sports, drive cars, and have family lives. Some live close to the traditional ways, and other are more immersed in modern culture.**
- **Don't speak as if Native Americans are only one large culture. Each group has its own language, customs, beliefs, and ways of living in the world.**
- **Don't belittle sacred ceremonies and beliefs by trying to imitate them. These are the heart and soul of Native cultures and are easily trivialized or misunderstood by mimicry.**
- **Do invite local Native people to visit with students and discuss their beliefs and ceremonies. Study Native ways objectively and as a lesson to be understood without being imitated and practiced. Encourage children to learn more about their own traditions and how their beliefs support our being close to, and caring toward, the earth and other people. In addition, please be sensitive to the sacred meanings of the visual symbols used by Native American cultures. Such symbols are "owned" by specific clans. Avoid using them for decorative or promotional purposes. Do help students become aware of the power of visual symbols in all cultures.**

Bibliographic information about the Caduto and Bruchac books can be found in the list of suggested resources at the back of this guide.

disciplines in the work of analyzing the ways cultural groups interact with their environments and use traditional knowledge.

We hope this guide will be a flexible resource for teachers. It is not intended to provide a complete curriculum for teaching Native American history or culture. Instead, it offers an introduction to aspects of the current lives of people whose knowledge is too often dismissed and whose practices and beliefs are too often viewed as relics of the past. Interdisciplinary teaching teams will find the guide useful for connecting social studies, language arts, and visual arts topics. Teachers of single-subject courses will find information and materials that will help them include Native American perspectives in environmental studies, geography, literature, art, and anthropology classes. It isn't necessary to use all of the materials and activities included in the guide. We hope they will be used to seed the development of Native American studies where none currently exist and to supplement those already underway.

KNOWLEDGE OF THE LAND

NATIVE AMERICAN CULTURES AND SUBSISTENCE

Suggested Activity

Cadaval's article contains vocabulary and concepts that will be unfamiliar to many students. However, these difficulties can be used to engage students in identifying questions and principles that will guide their study throughout this unit. A strategy for promoting active reading of the article follows.

Set a Purpose for Reading

"Land and Native American Cultures" contains several statements describing values and beliefs held in common by the Native American groups introduced by the author. Instruct students to highlight or underline these statements as they read. Some sample statements are below:

At the core of most Native American cultures are concepts of land, which shape all facets of political, social, economic, and symbolic life.

Native American cultures have generally perceived land as part of their cultural environment as well as the source of nourishment and shelter.

The natural and spiritual relationships between humans and land are central to the world order of many Native Americans.

Discuss and Apply

Give students time in small groups to discuss their selected statements. Students should work together to justify their selections. This process will help less capable readers arrive at meaning. You may want to help students rewrite the statements in their own words.

Follow up with a full class discussion and select several statements the students feel are the most "telling" about Native American beliefs and attitudes. Write out these statements on a length of newsprint or on individual tag-board strips. Hang them prominently on a classroom wall or bulletin board.

Follow Through

As study of Native American cultures continues, direct students to collect quotations, drawings, diagrams, cartoons, etc., from their reading and research that support and illustrate the general statements. These supporting data can be written on index cards and placed on the bulletin board to create a concept map, a graphic display of a central idea and relationships among supporting or qualifying ideas. Figure 1 below provides an example.

Figure 1

Art
Symbols woven into the agricultural belts of Taquile represent stages in the agricultural cycle.
Stories
In Southeast Alaskan tales, Raven often provides the things humans need to live in the world.
Land in Native American Cultures
Subsistence Practices
Hopi dry farming techniques are adapted to the dry, sandy conditions of their land.
Ritual and Ceremony
Aymara ceremonies show respect for the earth and invoke the aid of the spirits who control the forces of nature.

KNOWLEDGE AND POWER

Land in Native American Cultures

OLIVIA CADAVAL

The encounter between the peoples of the eastern and western hemispheres that began nearly 500 years ago has had a dramatic effect on the way land and natural resources in the Americas are thought about and used. Exploration and colonization led to land use practices foreign to those developed by indigenous societies and compatible with the existing ecosystem. Almost 500 years ago, newcomers failed to learn from those who understood their home environment. The European campaign of "discovery" and conquest made this exchange impossible. Native populations of the Americas continue to pass on their systematic knowledge about their environment, but usually only within their own communities. This year's commemoration of the 500th anniversary of the year before Columbus' voyage has been undertaken in the belief that it is possible for our present society to learn and profit from indigenous knowledge about the lands of the Americas. Conserving the earth in the present, as in the past, is as much about indigenous knowledge and society as it is about ecology and economics.

Since 1492, Native American lands and ways of life have been under siege. Native populations were enslaved, exploited and nearly exterminated, systematically driven off their lands, isolated in ecologically marginal reservations and largely disallowed social existence in the contemporary world except as subjects of ethnographic studies. The colonial despoilment of lands and resources, the cultural domination and distortion of native societies, the extinction of entire

populations and the conversion of people into second-class citizens was a prelude to the current onslaught of modern economic expansionism.

Today, Native Americans continue to be exploited and their lands continue to be to be expropriated while their cultural values and symbolic universes are denigrated and denied.

At the core of most Native American cultures are concepts of land, which shape all facets of political, social, economic and symbolic life. To Europeans, the 15th-century conquest of the Americas simply provided land to be exploited for the enrichment of European royal states. In contrast, Native American cultures have generally perceived land as part of their cultural environment as well as the source of nourishment and shelter. Land sustains Native American communities. At the 1990 Continental Conference, "500 Years of Indian Resistance," held in Quito, Ecuador, participants formally declared: "We do not consider ourselves owners of the land. It is our mother, not a piece of merchandise. It is an integral part of our life. It is our past, present and future."

The intruders' strategies to control Native Americans and their lands obscured the diversity of indigenous cultures; they defined European life as the only ethical model and classified all Native Americans simply as "savages," who had no valid culture of their own and who needed to be "civilized." The newcomers' lack of respect for the land was matched by the lack of respect they showed Native cultures. Diversity was excluded, and Native Americans were categorically called "Indians," ignoring the distinct cultures, histories, languages and ecological circumstances that have shaped Native American experience.

The first Europeans to come here encountered a world populated by many ancient and complex societies. The chronicler Bernal Díaz del

Castillo writes of Tenochtitlan (the Aztec urban complex that has become Mexico City),

> When we saw all those cities and villages built in the water, and other great towns on dry lands, and that straight and level causeway leading to Mexico, we were astounded. These great towns and cues and buildings rising from the water, all made of stone, seemed like an enchanted vision from the tale of Amadis. It was all so wonderful that I do not know how to describe this first glimpse of things never heard, seen or dreamed of before (Díaz del Castillo 1963).

The Aztec city of Tenochtitlan had a population larger than any city in Europe at that time.

The conquest succeeded in undermining political organization but not in eradicating cultural pluralism. Distinct, unique cultures continue to define the Native American landscape, in spite of profound transformations caused by particular histories of colonization, imposed patterns of settlement, missionary intrusions, and the more recent immigrations and forms of exploitation.

Native horticulture has depended upon crop variety and genetic diversity for maintaining successful food production in different environments. At the base of both Native American culture and horticulture is the concept of living in harmony with the diversity of the natural world. The Mexican anthropologist Arturo Warman uses the analogy of corn, which is native to the Americas. "Maize is our kin," he writes. Like American culture, he continues,

> . . . maize was not a natural miracle; maize was a human creation made possible through human intervention. Maize was the collective invention of millions of people over several millennia on this continent. So we have maize as a cultural product. But maize is also diversity and diversity means knowledge and experimentation. Diversity was the way to live near the natural environment and not to fight with it . . . (Warman 1991).

Contemporary Native Americans do not claim to have retained without change the cultures that existed prior to the European conquest. Much has perished, much has been destroyed and all has changed. In many cases, Native communities have been able to absorb and restructure foreign elements to respond to new situations. The Mayan anthropologist Jacinto Arias explains, "In our stories, we tell ourselves our way of being did not die; nor will it ever die, because we have special virtues that compel us to defend ourselves from any threat of destruction." These moral virtues combined with thousands of years of knowledge of land, cultural pride and struggle for self-determination have forged cultures of resistance.

Oriented both by the Smithsonian's overall concern for the conservation of cultures and by global attention focused on the meaning of the Quincentenary, this program will be an opportunity to hear the voices of members of Native American societies that have persevered for 500 years and have maintained an ancient care for the earth and the continuity of their own cultures.

This program samples the cultural and ecological diversity of Native American societies. The groups selected have for centuries continuously inhabited the regions presented. It is worthy of note that the continuity of their land tenure has depended in large part on the marginality of the land they inhabit. The Amazonian rainforests, called by the Shuar "the lungs of the world," are almost impenetrable and until recently were ignored by the outside world. The Andean highlands are harsh and inhospitable, as is the arid desert of the Hopi in Arizona. The steep and eroded Mexican mountains of Chiapas and Oaxaca are a challenge to native agriculturalists. The sandy dune country of the Ikoods is blighted alternately by drought or flood. Although rich in resources, the coastal rainforest of southeastern Alaska is almost inaccessible from the interior because of mountains. Communication even between communities is difficult due to the

impenetrable rainforest and has been limited to boats and more recently airplanes, weather permitting.

The program will present Native American knowledge about land as it informs sacred and secular practices, which are often inseparably intertwined. The natural and spiritual relationships between humans and lands are central to the world order of many Native Americans. As Chief Robbie Dick of the Cree Indians in Great Whale, Quebec, succinctly states, "It's very hard to explain to white people what we mean by 'Land is part of our life.' We're like rocks and trees." In Hopi tradition, physical and cultural survival derive from the unity of land and corn. Emory Sekaquaptewa explains how the "Hopi language and culture are intimately intertwined, binding corn, people and the land together" (Sekaquaptewa 1986).

The program is about land, ecosystems and cultural knowledge that have sustained Native American cultures before Columbus and in the present. Each culture represented has a vision of the cosmos and the world as a system of dynamic and interconnected processes. Research for the program examined how domestic, economic and ceremonial processes are connected through material and expressive culture to form a social fabric of productivity and meaning. Agricultural and ritual cycles often coincide in Native American cultures and echo seasonal rhythms of the land.

Participants in the Quincentenary program come from 15 different cultural groups in six different ecological areas, including northern and tropical rainforests, Andean highlands, Arizona desert, and Sierra Madre Mountains and coastal dunes of the Isthmus of Tehuantepec in Mexico.

The Tlingit, Haida and Tsimshian participants come from the Southeast Alaskan rainforest. They represent distinct but related cultures that form part of a broader cultural region extending from Alaska to the Northwest Coast. The Canelos Quichua, Shuar and

Achuar participants come from the rainforest region of eastern Ecuador, which forms part of the northwestern region of the Amazon river basin. Canelos Quichua have settlements in this area among the foothills of the Andes, while the Shuar live in the region's swampy lowlands, which extend beyond the Ecuadorian borders into Peru. The Achuar are the Shuar's neighbors to the east. The Lacandón participant comes from the rapidly disappearing rainforest region of eastern Chiapas in Mexico. Although different in history, social organization and cultural patterns, these northern and tropical rainforest societies often parallel one another in their management and understanding of the land.

The Andes mountains rise above much of Colombia, Ecuador, Peru and Bolivia. They form high plateaus where the climate is cool even at the equator, which passes through the highlands of Ecuador and Colombia. This region has altitudes ranging from 6,600 to 14,600 feet and an impressive diversity of terrains, microclimates and distinct cultural groups that live here.

Andean participants in our Festival come from three different cultural and ecological areas. The Aymara-speaking participants come from communities in the high pampas of Tiwanaku, which slope gradually into Lake Titicaca of Bolivia. Members of these communities are currently engaged in the Wila-Jawira Project to recover the ancient raised-field, or *suka kollus*, farming technology of the pre-Inca Tiwanaku society. The Jalq'a participants, who are also from Bolivia but speak Quechua, live in communities in a remote, rugged mountainous area south of Tiwanaku. Jalq'a cultural identity emerged among groups relocated by the Inca empire to be frontier outposts; links with their original communities were later completely severed by Spanish settlers. The third group of participants are Quechua-speaking Taquileños, who live on the island of Taquile in the Peruvian part of Lake Titicaca.

Hopi participants come from the high, arid desert of Arizona. Here the land has been eroded into buttes and mesas cut by deep canyons. Rivers flow only during snow melt or after a rainstorm, and streams flow underground. As in the Andean highlands, people can live in this dry region only with sophisticated agricultural techniques.

Participants from the multiethnic highlands of Chiapas in Mexico come from the Tzotzil-speaking community of San Pedro Chenalho and the Tzeltal-speaking community of Tenejapa. Communities in this Mayan cultural region renowned for its textiles distinguished themselves from one another by characteristic styles of dress. Weaving and natural dyeing traditions in the area are currently being revitalized by state and private self-help projects.

Like Chiapas, the state of Oaxaca in Mexico is also multiethnic. Zapotec participants come from the farming communities Zoogocho and Tenejapa in the northeastern mountainous region of the state. They differ in culture and dialect from the Zapotec communities to the west and the south. Ikood participants come from the fishing community of San Mateo del Mar in the dunes on the Pacific coast of the Isthmus of Tehuantepec. Although remaining culturally and linguistically distinct from nearby societies, they have long engaged in commercial trade with the dominant Zapotecs, who inhabit the surrounding area, and in bartering relationships with the Chontal, who live just north of them along the coast.

Participants will demonstrate subsistence activities and craft skills, present parts of ritual performances and narrate oral histories. These cultural elements have been passed from generation to generation and speak eloquently of the connections Native Americans have constructed between land and society. Discussion sessions will focus on some of the major issues which confront Native American cultures today. These include: natural resource management, traditional technology, maintenance and destruction of ecological equilibrium and questions of

monocultivation, property titles, national parks, transnational corporations, military zones, economic development models, agrarian reform laws, foreign debt, political repression, self-determination, cultural identity, intrusion of religious sects, fragmentation of lands and human rights.

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Teacher Preparation

"Knowledge and Power: Land in Native American Cultures" is an introduction to Native American groups participating in the "Land in Native American Cultures" program at the 1991 Festival of American Folklife in Washington, D.C. Olivia Cadaval eloquently describes diversity among indigenous groups, their shared respect for the land, and the impact of European settlement and domination on the indigenous people of the Americas.

This article can serve as background information for teachers or as a class reading assignment that will provide a starting point for class inquiry and discussion of Native American attitudes and values.

SUBSISTENCE

To stimulate initial discussion of the concept of subsistence, ask students to consider a food staple such as bread. Conduct a brainstorming session about the topic, encouraging students to contribute words and phrases associated with making and eating bread. You may want to provide a recipe for homemade bread and the ingredients list from a package of commercially baked bread as prompts. After brainstorming, divide the class into three groups. Provide each group with lengths of newsprint and markers. Each group will be responsible for "mapping" the production of a loaf of bread as follows:

Group A

Your culture makes bread as well as all of the ingredients and implements required to make it.

Group B

Your culture makes bread from ingredients purchased in bulk at a wholesale food cooperative.

Group C

Your culture purchases commercially baked bread from a retail grocer.

Students should be encouraged to work cooperatively to include as much detail as possible, including identifying the production and purchasing roles of various members of each culture. Stages of production can be represented with colors or graphic symbols. Once the maps are completed, they should be hung for the whole class to view and compare. Guide students to make comparisons regarding the involvement of the consumer in the production cycle and the use of natural and human resources. Finally, invite students to speculate on the meaning of the "distance" between production and consumption graphically represented on each of the maps and on how that distance might influence other aspects of daily life, including the way each culture views itself in relation to the land and its resources. How do you think the situations illustrated in Figure 2 influence the ways the people involved view the land?

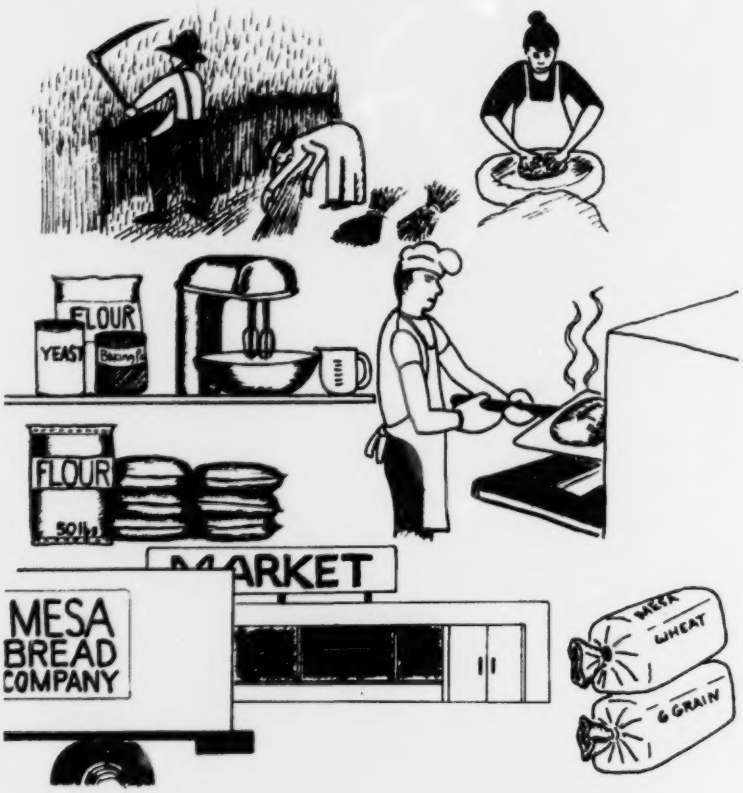
LAND, SUBSISTENCE, AND VALUES

Teacher Preparation

The following readings describe the subsistence practices of several distinct Native American groups — the Hopi of Arizona; the Tlingit, Tsimshian, and Haida of Southeast Alaska; and the Aymara of Bolivia. The practices of each group are discussed within the context of their environments and their spiritual relationships to the land. Although these groups occupy very different physical environments (see Figure 3), they share a vision of the world that places humans in a connecting, rather than controlling, position among the components of the natural world. Each of these groups has experienced extreme challenges as a result of the European conquest. Exploitation of land, disruption of

Figure 2

Figure 2 illustrates three ways of getting bread. Do you think our experiences with buying, preparing, or growing food influence the way we think about the land?



spiritual practices, and destruction of social structures are the legacies of colonization. These groups — along with other Native American participants in the Festival of American Folklife — are meeting these challenges with the power derived from cultural pride and knowledge of the land.

Focus Questions

What is subsistence? What are the characteristics of subsistence cultures? How does geographic location influence subsistence practices? What are the subsistence practices of the Hopi, Southeast Alaskan, and Aymara people? How are they related? How are they different?

Suggested Activity

These readings are occasionally interrupted with **TIME OUT** activities

designed to give students opportunities to recall prior knowledge, reflect on their reading, and apply their understanding.

What Is Subsistence?

In the United States most people participate in a wage economy. In return for providing a service, using a skill, or making a product, an employee receives a set amount of money. With this money, the worker purchases food, shelter, transportation, and other necessities. In a wage economy, most workers do not *directly* participate in producing food, shelter, and clothing for themselves. An auto worker in Detroit with no gardening skill can enjoy a tomato from Florida in January if he is willing and able to pay the cost of growing, packaging, and transporting the fruit from one climate to another. His ability to purchase the tomato depends on his employer's continuing need for his skill, which, in turn, depends on the nationwide demand for new automobiles.

Subsistence economies function differently. Production and consumption are geared to the survival of the local group, rather than to the demands of a state or national market. Traditionally, subsistence cultures extracted all of their needs from the environment in which they lived or from trade with other groups. In the past, a traditional Hopi family's day-to-day survival depended on extensive knowledge of the natural world and skillful use of its resources to produce food, shelter, clothing, medicine, and tools for the group's immediate needs. Because of this direct dependence on the environment, survival required careful use and maintenance of natural resources as well as teaching these skills to Hopi children. Most Native Americans today participate in the wage economy to some degree, but subsistence practices are still important ways of acquiring food and shelter. They are also important ways of preserving and sharing cultural knowledge.

As you read about the subsistence practices of these cultures, search for clues about how their ways of using natural resources are tied to the environments they occupy and their beliefs about the natural world.

Figure 3

The Native people of Southeast Alaska, northeastern Arizona, and the Andes live in three distinct environments. In what ways do you think these environments influence subsistence practices?

HOPI: PEOPLE OF THE CORN

The Hopi people live in northeastern Arizona on the high, dry Colorado Plateau (see Figure 4). Buttes and mesas rise out of the Painted Desert, which is cut dramatically by deep canyons. Hopi land is bordered by the San Francisco Mountains to the southwest, the Grand Canyon to the west, the Colorado River to the north, and the Chuska Mountains to the east. Only the Colorado and San Juan rivers have continuously flowing water; other rivers and streams flow only during spring snowmelt or after a rainstorm.

TIME OUT

Look at the photos on the next page. Work with your classmates to:

- **List as many words as you can think of to describe the physical characteristics of this location.**
- **Describe how this place differs from the place where you live.**
- **How is it similar?**
- **What geographic factors (rainfall, temperature, elevation, latitude, etc.) are responsible for these differences and similarities?**

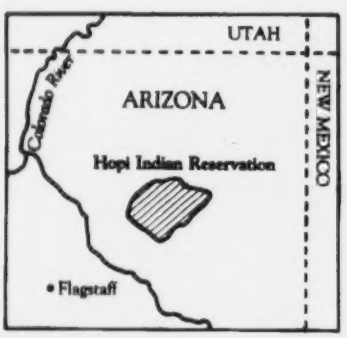


Figure 4

The Hopi people live in northeastern Arizona on the high, dry Colorado Plateau.

The Hopi people have occupied this environment for thousands of years. Anthropologists believe the modern Hopi are descendants of people who lived in the San Juan Valley until around the 13th century, when a drought drove them to move southward. But there is evidence that Hopi ancestors occupied the mesas and surrounding countryside long before — as early as 900 A.D. Clan stories refer to travelers from the Pacific Islands. Clan markings and ruins can be found from the Grand Canyon to the Arizona/Mexico borderlands. Hopi traditional history indicates that several groups and clans migrated from the north, east, and south, joining and integrating with the Hopi.

Twelve villages are located below or at the tops of three "fingers" which project out from the huge Black Mesa — First, Second, and Third Mesas (Figure 6). Oraibi, located on Third Mesa, is believed to

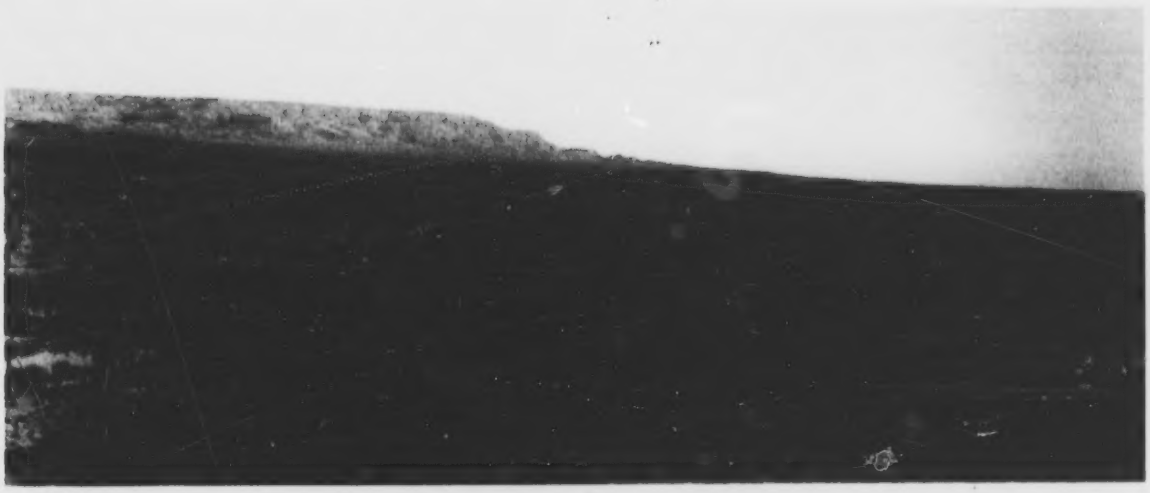


Figure 5

The Hopi developed special farming techniques suitable to the unique conditions of their environment. Photo courtesy Smithsonian Institution.

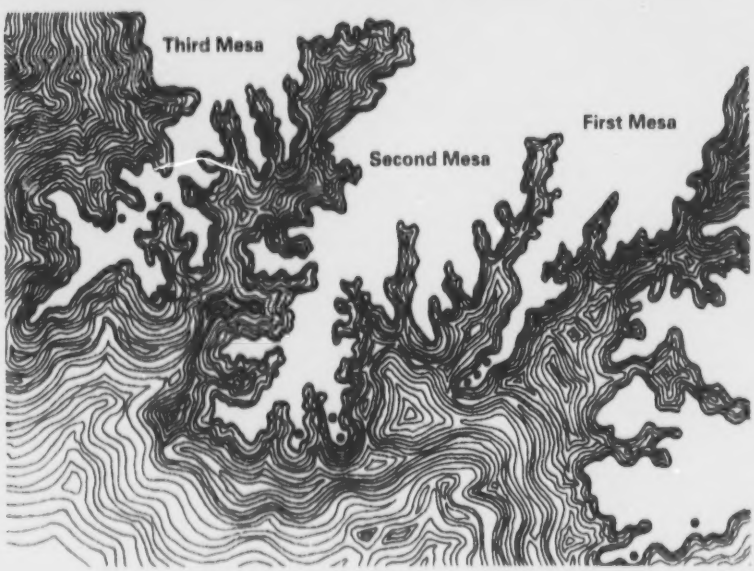


Figure 6

Hopi communities are located below or at the tops of three mesas.

Figure 7

Traditional Hopi dwellings were built on top of mesas overlooking the desert. In recent years, more and more Hopi have built homes below the mesas, closer to roads and services. Photo courtesy Smithsonian Institution.

be the oldest continuously inhabited settlement in the United States, dating back to at least 1150 A.D. Figure 7 shows a traditional mesa-top community overlooking the northeast Arizona desert. Today most Hopi live below the mesas, closer to schools, community centers, and highways.

Because of the climate, the 4,000 square miles of Hopi land are frequently described as "inhospitable" or "harsh." In this region, water for farming is supplied through summer rains and winter snows, but in very small amounts. The area receives an average of only 10-13 inches of rain annually. In comparison, farmland in the midwestern section of the United States receives about 40 inches of precipitation annually. Over half the rain falls in torrential summer downpours that flood the washes surrounding the mesas and sweep away topsoil and crops. Washes are areas where stream beds widen and the water flow ceases during dry periods.

The northern Hopi lands reach to 7,500 feet above sea level. In this area, the average winter temperature is about 32 degrees. Here, killing frosts threaten to ruin crops and diminish the already short growing season. The lowest part of the land lies at 4,500 feet above sea level. Higher temperatures and lower rainfall characterize this area. Periodically, the gusty winds that sweep over the land stir up sandstorms that seriously damage crops.

TIME OUT

What natural elements or forces can jeopardize crop production in other parts of the world?

These conditions present the Hopi people with extreme challenges. Yet their land is one of profound beauty and diverse microenvironments. The Hopi make the most of this diversity. Men collect herbs and aspen from the distant San Francisco peaks for use in ceremonies. Yellow pine and Douglas fir from these mountains were once used for house

construction. Women collected green vegetables such as mustard greens, which grow wild throughout Hopi lands, as a food source. Other gathered plants provide material for making baskets and medicinal and ceremonial herbs. Sunflower seeds and other plant products are used for making dyes. Seepage springs located along the bases of the mesas create oases that support the growth of cottonwoods, whose roots are used to make Kachina dolls (see Figure 8).

Over the centuries, the Hopi have developed specialized agricultural methods that maximize the positive aspects of their land. In fact, the Hopi people believe they were led to this land of scant rainfall so they would have to rely upon the Creator, as well as on their own knowledge and power, to survive. According to Hopi belief, humans were brought to this world after they failed to heed the directives of their Creator (Taiowa) in three previous worlds where everything they needed was provided for them. Upon emergence into the Fourth World they were told:

The name of this Fourth World is Tuwaqachi, World Complete . . . . It is not all beautiful and easy like the previous ones. It has height and depth, heat and cold, beauty and barrenness; it has everything for you to choose from. What you choose will determine if this time you can carry out the plan of Creation on it or whether it must in time be destroyed too (Waters 1963).

Therefore, Hopi agricultural activities are one way of acknowledging and praising the supremacy of Taiowa.

Black Mesa lies on top of a subterranean reservoir that holds a small but relatively constant water supply. Moisture seeps through the sandstone surface to the underlying bedrock and emerges from the faces of the mesa's southern cliffs in the form of springs. The sand dunes on top of and along the mesa slopes hold moisture, preventing

Figure 8

Kachina dolls, traditionally made from cottonwood roots, are given to Hopi children to help them learn about the supernatural beings that are part of Hopi religious beliefs. These dolls are simple representations of the Kachina figures that appear during Hopi ceremonies. Kachina dolls made for sale to collectors are more elaborate. Photo by Carmelo Guadagno, courtesy National Museum of the American Indian, Smithsonian Institution.

rapid run-off during rains. This water also seeps into the sandstone, providing good land for dry farming. The dry farming method involves planting seeds deep (8-18 inches) in the soil so plant roots can reach the underground moisture (see Figure 9). Hopi farmers take great care to protect the durable and ancient seed varieties that produce plant shoots strong enough to grow through the earth to the soil surface.

Crops are also planted in small fields below the mesas near washes. During the heavy rains of late summer, rain water flows through the streams and moistens the fields.

Because of the uncertain soil and weather conditions, a Hopi farmer plants a number of plots of land that have different soil types. This way, if a crop in one location is destroyed by drought, flood, or pests, another may survive, protecting the farmer against the loss of an entire harvest.

TIME OUT

Find out what geological and environmental characteristics influence farming methods in the area where you live.

Corn is central to the Hopi way of life. Corn, which is native to the Americas, was grown and eaten by the prehistoric ancestors of the Hopi and is still considered their primary source of sustenance. According to Hopi tradition, corn was made available to the people upon their emergence to the Fourth World, when the god Masauwu granted them the privileges and responsibilities of living with the land. Its cultivation is both an agricultural and a spiritual process, a life-sustaining labor and a ritual that celebrates and confirms the Hopi partnership with the earth. Some form of corn is used in every Hopi ceremony. Newborns are given an ear of corn equating the loving

Figure 9

Hopi farmers use planting sticks to place seeds 8-18 inches below the soil surface.

Figure 10

The cardinal directions of the Hopi world have significance in Hopi history, agriculture, and religious life.

sustenance provided by a nursing mother with the nourishment provided by Mother Earth. The words for mother, for the corn given to a newborn, and for the earth are the same in the Hopi language — *itangu*. The Hopi agricultural cycle is closely linked with the ceremonial cycles that enact the traditional religious beliefs of the Hopi people.

The planting season begins in April and lasts through July. Everyone is involved in some way. Traditionally, Hopi women become the caretakers of corn once it is harvested, so at planting time, they select the seeds to be used for new crops. The men usually determine which fields will be used. Working either alone or in work groups, the Hopi men and boys plant their corn, using a stick or metal pipe to make the deep holes that insure the seeds will have enough moisture for germination. Six to twelve kernels of seed corn are planted in each hole.

Six principal types of corn are grown, each associated with particular cooking qualities. Four of these varieties symbolize the four cardinal directions of the Hopi world (see Figure 10). Red corn is southeast, blue is southwest, white is northeast, and yellow corn is northwest. These directions are sacred, representing the directions traveled by the people as they searched for a common homeland. They are also related to the directions from which the wind and rain come and the places of sunrise and sunset at the summer and winter solstices. In addition, purple corn represents zenith (above), and sweet corn represents nadir (below).

Once the fields are planted, the men carefully tend to their crops, nurturing the individual stalks of corn as if they were children. The corn plants are called by family names such as "sister" and "mother." The men sing songs to the plants that encourage them to grow faster, taller, and stronger. The farmer must clear weeds and pests from his field each morning and evening. As Merwin Kooyahoema, a Hopi participant in the 1991 Festival of American Folklife, explained, " . . . A lot of people now . . . talk to their plants and whatnot. The Hopi have done that a long time . . . . You kind of encourage your corn as it

grows . . . . We treat [the plants] like they're children."

The first corn is gathered in July and is given to the Kachinas (spirits) during the Niman or "Home Dance" ceremony. This corn is not eaten. The entire corn plant is pulled from the ground and offered in repayment to the Kachinas — who are present in this world for six months of the year to bring fertility and growth — before their annual return to the underworld. In September, sweet corn is ready to be harvested. Some sweet corn is eaten fresh, but most of the ears are roasted in underground ovens and stored for future use. The remaining corn crops are harvested in October. The corn is picked, husked, and hauled to the villages where it will be separated by color. The corn is laid out to dry on the rooftops. It is turned frequently for thorough drying, then stacked in colorful rows in sheds. As a precaution against famine, many families store enough corn to last for several years. After they have completed this hard work, they hold ceremonial dances to celebrate a successful harvest and to begin another cycle of fertility, germination, and growth.

Interview a gardener or a house-plant enthusiast. Find out if he or she follows a specific "agricultural cycle." Some people name or sing to the plants they grow. Ask the subject of your interview about these techniques.

OR

Interview a farmer who works in your area. What is the cycle he or she follows for planting, growing, and harvesting? Are there any special celebrations or rituals that accompany the process?

Although planting and tending crops is primarily the work of men, Hopi women also devote a great deal of time and energy to corn. Most women have household gardens where some corn is grown, but women are most actively involved in preserving and cooking corn once it is grown and harvested. White corn is the most important Hopi crop and

is used for flour and *tamales*. Blue corn is a common ingredient in breads, sauces, and drinks. It is essential for making *piki* bread, a papery, flaky bread eaten as a daily staple and used in ceremonies. Both types of cornmeal are used as prayer offerings. More than thirty dishes whose main ingredient is corn or cornmeal are served at Hopi meals on a regular basis. It is important that a supply of cornmeal is readily available at all times.

Grinding corn into meal is hard work (see Figure 11). Today, most corn is ground at village mills, but traditionally, Hopi women ground corn on grinding stones in their own homes. A woman's industriousness was often judged by the amount of cornmeal she was able to grind.

Hopi girls learn how to grind corn from their mothers, aunts, or grandmothers. Instruction begins at an early age. In the past, corn grinding was often the backdrop for social activities. An uncle or grandfather might sing while a group of young girls ground corn. The grinding stones were often located near a window, providing a way for a boy to court a girl while she was grinding. If the boy's attention was welcome, he and the girl would visit through the window; however, if he was not welcome, the girl would throw cornmeal at him (Kavena 1980).

TIME OUT

Hopi finger bread, or *huzusuki,* is more like pudding than the bread you use to make sandwiches, but it is eaten with the fingers. It is served with roasted meats and stews. Leftovers are sliced, fried in hot shortening, and served for breakfast with syrup or jelly. Many cultures have a similar dish. In Tanzania it is called *ugali;* in Italy it is *polenta,* and American Southerners know it as mush.

You can make the following recipe with yellow or white cornmeal, but blue cornmeal is not hard to find and will give your *huzusuki* a traditional Hopi flavor.

Figure 11

Grinding corn is hard work. For Hopi women, grinding corn is both a social and a spiritual activity. Women talk and sing during grinding. The work of preparing cornmeal for cooking and for sacred rituals is also an act of gratitude for a bountiful harvest.

Hopi Finger Bread (Huzusuki)

1 and 3/4 cups blue cornmeal (available at natural food stores)
2 cups water
Bring the water to a boil, then reduce the heat to low. Gradually add the cornmeal to boiling water, stirring constantly. Stir until all cornmeal is mixed in. This makes a very stiff dough. Spoon the bread out onto a plate and serve. To eat, each person breaks off a piece, using the thumb and forefinger to hold it.

From Juanita Tiger Kavena, *Hopi Cookery* (1980).

OR

Scavenger Hunt

Corn kernels can be processed into alcohol, sugar, or starch to make an amazing variety of products (see Figure 12). Some of these products are used as ingredients in foods we eat. Some are used in things you would never think of eating. For example, corn syrup is used in fruit drinks as well as shoe polish. Dextrose is used to make a fuel to power cars. Corn starch is used to make gravy . . . and glue! The germ of the corn kernel is pressed to get corn oil, which we eat regularly in salad dressing. It is also used in some insecticides. Conduct a search for corn products in your house. Check product labels to find all the ways you depend on corn.

In addition to corn, the Hopi plant a variety of other plants, some native to the region and others introduced from various sources over the years. An excellent source of protein and carbohydrates, beans are an important staple and are usually eaten in combination with corn. Today, the Hopi grow over twenty different types of beans. Most of these varieties were introduced to the Hopi through trade with other Native groups. Like corn, beans are used in Hopi ceremonies.

Beans may be eaten fresh or may be dried and stored for future use. Hopi green beans are the only beans eaten in the pod. To dry them, the Hopi tie the pods together on strings of fiber from the yucca plant and then hang them out in the sun. For other types of beans, such as kidney, pinto, and teppary beans, harvest is delayed until the bean pods fully mature and the vines become brittle. The whole plants are then uprooted and carried back to the village, where they are stacked in heaping piles. Women then form a "work party" to shell the beans. While the pods and vines are set aside to be burned for culinary ashes (specially prepared ashes which are added to dishes to add color, flavor, and essential minerals), the shelled beans are laid out in the sun. After several days, the beans are completely dry and ready to be stored

Figure 12

All of these household items contain corn products. Can you find others in your home? Photo by Jym Wilson.

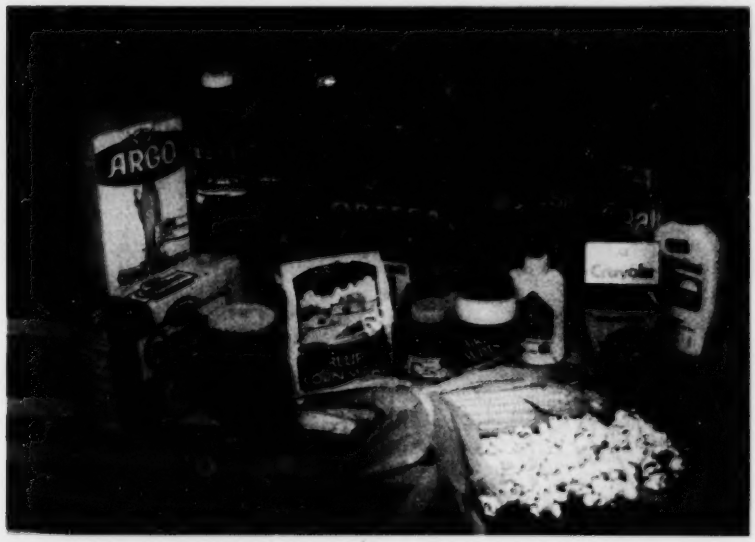


Figure 13

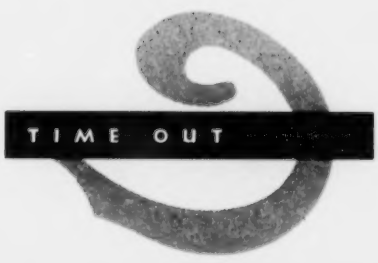
Hopi farmers grow a variety of food crops native to the Americas.

away. Eventually, these dried beans will be boiled and served as part of a meal.

Other Native crops include pumpkins, squash, melons, and gourds (see Figure 13). A favorite Hopi squash is the green striped cushaw. Melons are eaten as they ripen, but squash and pumpkins can be sliced into thin strips and sun-dried to last throughout the winter. Although they are not edible, hard-shelled gourds can be fashioned into spoons, bowls, water dippers, baby rattles, and containers.

Contact with Spanish missionaries in the 16th century resulted in the introduction of new crops. Among these were wheat and fruit trees. Because of killing frosts in the high altitudes, Hopi orchards do not produce fruit crops every year. In good years, the trees yield peaches, apples, apricots, and pears. The fruits may be halved, pitted, and spread out on the rooftops to dry in the hot Arizona sun, providing sweet, nonperishable treats for children. Wheat is used primarily in the baking of breads, although corn breads continue to be more popular.

Terraced gardens, owned and managed by women, are irrigated to insure the availability of fresh produce for the household. Women inherit these fields from their mothers. They raise chile peppers and garden vegetables such as tomatoes, carrots, onions, and cucumbers.



How has the physical environment influenced Hopi food preservation techniques?

Figure 21

The benefits of a bountiful harvest are two-fold: communities produce healthy food for their own use and for sale in regional markets. Photo by Kevin Healy, courtesy Smithsonian Institution.

like potatoes are kept in thatched storehouses. A meal is made by boiling the *chuñu* with water and salt until they are soft (see Figure 23). Then the water is poured off, and the potatoes are eaten with cheese.

Quinoa is the seed of the goosefoot plant. It is used like grain. You can find quinoa in many natural food stores. The following recipe, which contains several Native American foods, is an example of how this ancient food is being used by health-conscious cooks. Several of the ingredients are not common foods in the Andes. Black beans and jalapeño chiles, for example, are used mostly in Mexico.

Quinoa and Black Bean Salad

1 and 1/2 cups quinoa

1 and 1/2 cups cooked black beans (rinse if canned)

1 and 1/2 tablespoons red-wine vinegar

1 and 1/2 cups cooked corn (frozen or cut from about 2 large ears)

3/4 cup chopped green bell pepper

2 pickled jalapeño chiles, seeded and minced (wear rubber gloves to do this)

1/4 cup finely chopped fresh coriander

OR

Try drying some fruits and vegetables at home. What special techniques or equipment are necessary in your climate?

Over the past 500 years, the Hopi people have maintained a fierce defense against the intrusion of Spanish colonialists, Christian missionaries, and others who have attempted to undermine traditional beliefs and practices. In 1680 the Hopi and other Pueblo Indians fought a successful rebellion to drive the Spanish out of their lands. Although the influence of outside groups is apparent in Hopi life, cultural pride has kept Hopi subsistence practices alive for centuries. The Hopi are the only North American Native group to never sell any of their land to the U.S. Government. However, traditional ways are threatened as each year fewer acres are planted in corn and more, and more young people choose other ways of living. Hopi people fear that if agricultural practices are lost, spiritual practices and beliefs will be lost as well. For traditional Hopi, agriculture is the center of physical and spiritual life.

An ancient Hopi prophecy predicts that Hopi corn will supply the seeds that will save all of humankind from a terrible famine. Many Hopi feel a responsibility to maintain traditional practices for this reason. Tasawytewa of Bacavi village described his feelings in 1982:

I am old, my eyes are failing me; but I must plant my corn fields again. At my age I have but a small field, but it is my duty to plant the corn. It is spoken by our forefathers that one day the Hopis will once again experience starvation. It will not matter if you are rich (materialistically), for when we get to this period, you will also be going door to door begging for food. Now I want to have some corn seeds for the people; for it is also spoken that the person(s) who have seeds will enable the people to survive . . . . They will become like fathers to the

people. It is for this reason that I must farm . . . for my people (Hopi Health Department 1984).

TIME OUT

Today's large-scale, "industrial" farming methods rely on hybrid seeds, irrigation, pesticides, fertilization, and nonrenewable energy to maintain production. While these methods produce astonishing harvests, they are dependent on a delicate balance of natural circumstances and technology. This balance is vulnerable to large-scale disasters such as widespread, long-term drought, economic collapse, and war. Hopi farmers use seeds and methods that are naturally adapted to severe conditions. The nutritional content of Hopi blue cornmeal has been shown to be superior to that of commercially prepared white flour. Many environmentalists believe that Native agricultural practices produce better food with less damage to soil and surrounding ecosystems. Why is this the case? How does this information relate to the Hopi prophecy?

TIWANAKU: A HOPEFUL FUTURE FROM THE ANCIENT PAST

The Andes Mountains extend 4,500 miles north to south, paralleling the Pacific coast of South America and spanning seven countries from Venezuela to Chile. This vast mountain system dominates diverse cultures and ecosystems. In Peru and Bolivia, the mountain system widens to form multiple ranges and a high plateau, or *altiplano*. The *altiplano* stretches 74-100 miles from east to west and is over 500 miles long from north to south (see Figure 14). Valleys and ravines wind down to the Amazon jungle to the east and to the desert coast of the Pacific to the west. Cradled on the *altiplano* is Lake Titicaca, the largest (about 3,200 square miles) freshwater lake in South America.

This environment is one of astonishing diversity. Over 13,000 feet above sea level, the region is alive with sparkling streams and mountain flowers during the wet seasons. In dry periods the land is cold and parched. Frequent frosts or flash floods can kill crops overnight.

Figure 14

In Peru and Bolivia the Andean mountain system widens to form multiple ranges and a high plateau, or altiplano.

Figure 15 provides a view of this landscape.

Diversity also characterizes the various cultural groups that live throughout the region. Like the Native people of the southwestern United States and the coastal groups of Southeast Alaska and British Columbia, the people of the Andes have many things in common. The general term "Andean" is used to refer to a number of different groups who have distinct languages and cultural traditions, such as the Taquile from the Lake Titicaca region in Peru and the Jalq'a and Tarabuco from the lower regions in Bolivia.

The *altiplano* is home to the Aymara people, whose ancestors domesticated the South American *camelidae* (alpacas, llamas, vicuñas, and *guanacos*). These species provided wool for clothing, meat for food, and dung for fuel. They were also used as pack animals. The people were nomadic, following the herd animals in search of fresh pasture land in the highlands during the warm seasons and crossing the mountains to the valleys in the colder months. With the introduction of agriculture around 1800 B.C., people established permanent communities.

The people of these communities, or *ayllus*, developed occupations suited to their location on a particular mountain. Diverse temperature and soil conditions (conditions change with every 600 feet of elevation) prevented any single *ayllu* from producing all of its necessities. Therefore, the people organized trading networks linking the highland potato-growing regions with the lower areas where corn and other grains could be grown. These products were traded for fish from Lake Titicaca. Likewise, some communities became known for specialties such as pottery and jewelry and traded these goods for food from other communities. These networks were strengthened by the exogamous traditions (meaning marriages between members of separate communities are the norm) of the people.

Over time, a small market village called Tiwanaku grew to become a bustling trade and ceremonial center, linking the agricultural

Figure 15

The altiplano *is home to diverse people and ecosystems. Photo by Nancy Rosoff, courtesy Smithsonian Institution.*

and spiritual lives of more than 100,000 inhabitants as well as those of the farmers and traders from the outlying areas. Eventually, Tiwanaku became the capital of a vast pre-Incan state that included portions of what is now Peru, Argentina, Chile, and Bolivia.

It was an empire established on the abundant produce of its agricultural systems. The surplus crops gave Tiwanaku the luxury of time and inclination to raise armies that began conquering the Andes before Jesus was born.

It was an empire that continued to grow until some time after 1000 A.D., establishing great agricultural colonies patterned after its own fields throughout the Andes. Its armies reigned supreme over people of many cultures and tongues. Its engineers built a vast system of paved highways over mountains and through deserts and jungles.

The highways enabled Tiwanaku to maintain a constant flow of goods throughout the empire. Royal bureaucrats traveled the highways along with the imperial armies and the endless chains of llama caravans. These bureaucrats kept tabs on far-flung imperial outposts, spreading Tiwanaku's considerable technology and artistry that was

unsurpassed by any other pre-Columbian Andean culture and even by the Incas.

And as with ancient Rome, all the highways eventually led to one place, to Tiwanaku . . . .

Someone visiting the capital city 1,500 years ago would have come to it by one of many paved highways over the mountains. Before descending into Tiwanaku's valley, he would have stopped to admire what lay before him, a city shimmering in the bright Andean sunlight, for much of it was covered with gold.

The Tiwanaku skyline was dominated by imposing pyramids, temples and palaces. The two largest, the Kalasasaya temple and the Akapan pyramid, ran some 600 feet long on each side and rose to more than 50 feet in height. They were constructed of huge granitelike stones called andesite, some weighing more than 160 tons, that were ferried to the city on reed boats from quarries across the lake.

Much of the exteriors of the city's grand stone buildings was covered with intricately carved friezes and bas-relief adornments. The finely carved surfaces, however, were not left bare but were covered with thin plates of gold that were formed to follow the contours of the carvings underneath. Portions of buildings not covered with gold were painted in varying hues of blue, red, gold and black. The effect was to give the imperial city a sheen of dazzling opulence (Mullen 1988).

Powerful societies like Tiwanaku cannot emerge and endure without steady agricultural production that not only meets the immediate needs of the people but also produces food surpluses to be stored and traded. On the Bolivian *altiplano*, this meant combating a climate where drought, floods, frosts, hailstorms, and windstorms create considerable risks for farmers. In fact, today, Bolivia is one of the poorest nations in the world, and many of its farmers are barely able to produce enough

food for the daily needs of their families. Agronomists and other specialists who work to find ways to increase food production have tended to believe that the *altiplano* region is not fit for agriculture. The hillside soil on which many Aymara farm is alarmingly devoid of nutrients. After three to four years of planting, the fields must lie fallow for ten to fifteen years to allow sufficient nutrients to return to the soil before cultivation can begin again. The lower wetlands, areas which are saturated with moisture, are richer in nutrients, but the marshy conditions make cultivation difficult, and crops are likely to rot. With these conditions, how were the farmers of the ancient Tiwanaku state able to grow enough food to feed its citizens for over 1,000 years?

The answer may lie in the work of archaeologists such as Alan Kolata and Oswaldo Rivera. As they worked among ruined temples (see Figure 16) in the early 1980s to learn about the ancient Tiwanaku civilization, they wondered how a region that barely supports the 7,000 people who live in today's village of Tiwanaku was able to produce harvests that supported an ancient population of over 125,000 people.

The valleys on which the Aymara people of the Lake Titicaca basin reside are marked by curious patterns of ridges and depressions. It was clear to Kolata and Rivera that these patterns were human-made (see

Figure 16

The ancient city of Tiwanaku was once the religious and economic center of a civilization that included portions of what is now Peru, Argentina, Chile, and Bolivia. Photo by Pete Reiniger, courtesy Smithsonian Institution.

Figure 17). In Central America, landscapes with similar features had been surveyed and reconstructed into agricultural fields. A similar reconstruction project was unfolding on the Peruvian side of Lake Titicaca. Could fields such as these have supported the ancient Tiwanakan empire? Kolata and Rivera looked for a community that would be willing to help them test this hypothesis by rehabilitating and planting a field.

Colonial interference and domination made the Aymara understandably distrustful of strangers. When Rivera and Kolata began work in the community of Lakaya in 1981, their presence was blamed for a severe drought, and the two archaeologists were pelted with stones and run out of the village. The farmers feared that these outsiders would rob them of land as Spanish settlers had before. Additionally, the Aymara had used dry farming methods on hill slopes for centuries. They believed these methods, introduced by the Incas and promoted by Europeans, protected their crops from frost damage. As far as they knew, the wetland areas had never been tilled, and they believed that breaking up this virgin soil could threaten their delicate relationship with Pachamama (Mother Earth) and invite drought. The Aymara retained no memory of the agricultural practices of their

Figure 17

Archaeologists saw evidence of long-forgotten farming techniques in the patterned ridges found in the valleys of the Lake Titicaca basin. Photo by Oswaldo Rivera Sundt, courtesy Smithsonian Institution.

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Tiwanakan ancestors.

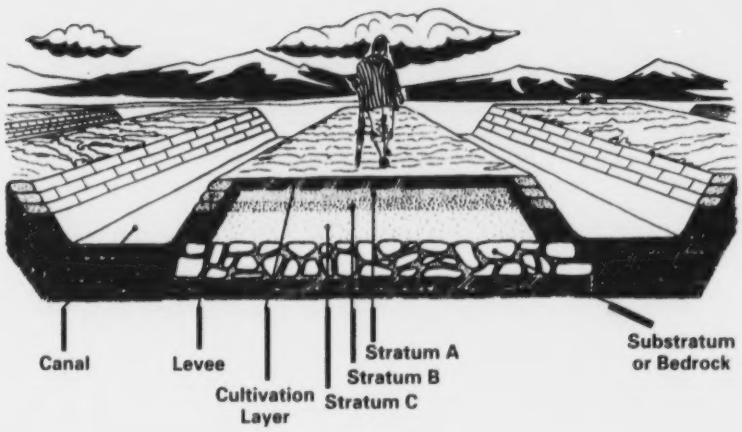
In 1987, Roberto Cruz Yupanqui from the community of Chukara braved public ridicule and the threat of banishment from his community to become a participant in the revitalization project. Cruz came to Washington, D.C, in 1991 for the Festival of American Folklife to tell the story of his role in the project. As he told the Festival audience, he found it hard to believe that his exhausted, boggy lands on the Pampa Koani were once fertile, and that they would produce once again if he reconstructed the system of raised fields and canals that Kolata and Rivera believed had supported the healthy agricultural lives of the Aymara "grandfathers." Eventually, Cruz agreed to devote his fields to the experiment.

During the project's first year of planting, Cruz saw his potato plants grow tall and strong. Then an amazing event occurred. One night, a killing frost swept over the *altiplano*. Throughout the freezing night, farmers kept watch over their fields, hoping to minimize the damage. As Cruz stood over his crops, he saw a cloud of mist covering his field like a blanket. He feared the worst, but when he surveyed his field the next morning, he found that most of his crops remained green and healthy. While the other farmers lost a devastating 90 percent of their crops to the bitter frost, only 10 percent of Cruz's crops were damaged.

The system of agriculture that shielded Cruz's field from the frost is called ***suka kollu***, or raised field agriculture. Developed over 3,000 years ago by ancestors of the Aymara, the ***suka kollu*** system is characterized by a network of alternating canals and mounds. The crops are cultivated on five-foot-high mounds constructed of a cobblestone base, a layer of clay, a layer of coarse gravel, a layer of finer gravel, and finally a layer of topsoil (see Figure 18). The fields reach 50 feet in width and 600 feet in length. Crops are planted on these earthen mounds, but the secret of the system's success lies in the canal system

Figure 18

Raised fields are constructed to prevent crops from rotting in boggy soil. Solar energy protects plants from killing frosts. Illustration by Hugo Saldin, courtesy Proyecto Agro-Arqueológico Wila Jawira-Rehasuk.



that surrounds them.

The *suka kollu* canals serve three key functions.

• The canals prevent frost damage by absorbing and storing heat during the day when the *altiplano* receives intense sunlight. During the night, when temperatures plummet, this heat is radiated out from the canal water. As Cruz observed on that threatening night in 1988, an insulating cloud of mist forms out of the warm moisture in the canals and raises the temperature of the air and soil, protecting plant foliage and roots. Thus, the ancient farmers of Tiwanaku were the first ever to harness the heat of the sun and use solar energy to shield their crops from frost.

• The canals act as an irrigation system and bring moisture to the soil. Water from local rivers, natural springs, and ground water is directed to the canals, creating manageable agricultural fields without destroying the natural wetland ecosystem.

• The canals generate a mineral-rich organic fertilizer. As algae and other plants colonize the surface of a canal, they form a thick mat of vegetation. These nitrogen-fixing plants can be harvested directly from the canal surface and incorporated into the planting beds. Plants left in the canals eventually decay, and their debris sinks and becomes embedded in the sediment on the canal bottom. Fish and other animal life living in the canals contribute additional nutrients. By cutting off the

water and drying out the canal, farmers can "harvest" the accumulated organic debris and use it as fertilizer. This organic fertilizer helps farmers produce healthy crops without the application of expensive chemical fertilizers. Cruz told the Festival audience, "In the old fields we used chemical fertilizers. It was more expensive and it did not yield [as large a harvest]. And in *suka kollus* the investment is little and it yields more for us."

TIME OUT

Do farmers in your region use solar energy? In what ways?

OR

Why are chemical fertilizers harmful to the environment? What are some of the alternatives used by farmers in your region?

OR

Would raised field agriculture work for Hopi farmers? Make a chart to compare the characteristics of these two highland environments. What does this comparison tell you about the farming methods most appropriate for each location?

The successful first harvest from Cruz's raised fields caught the attention of other farmers. Communities formed organized work groups to dig channels and build mounds. Power machines are not suitable for use in the wetland areas, so men and women labored together using foot plows, shovels, pickaxes, and hammers to construct the fields (see Figure 19). Farming is a community occupation for the Aymara, and the *suka kollu* project created an opportunity for community groups to work together to improve food production. As the head of an organization of mothers in Lakaya (the community that initially rejected the two archaeologists), Bonifacia Quispe Fernández used her position to influence and organize a group of eighty-five women for reconstruction of a field. Their first crop yielded an abundance of potatoes, carrots, and onions.

These projects demonstrated that *suka kollu* not only works, but is far more productive than the European methods used for centuries (see Figure 20). The *suka kollu* fields yielded an astonishing 40 tons of produce per hectare (2.5 acres), compared to the 2-3 tons of produce per hectare yielded in the fields that were dry farmed. Additionally, these fields were able to produce two crops per year. The potatoes cultivated in the raised fields grew larger, better, and were free of nematodes. Some of the potatoes were as large as grapefruits and weighed over two pounds. Potatoes are the principal staple crop of the Aymara; therefore their successful production in raised fields is a great source of hope for the impoverished inhabitants of the Bolivian *altiplano*. Other fields planted with lettuce, carrots, and onions also yielded bountiful harvests.

Today over 1,200 Aymara families participate in the *suka kollu* rehabilitation project. This project provides a model of how scientists and communities can work cooperatively to improve both the nutritional and economic status of indigenous people. Through experimentation, the Aymara have learned that they can grow all but the most frost-sensitive plants in the *suka kollu* fields. Farmers make maximum use of space and soil nutrients through multicropping, or planting several kinds of crops in the same fields.

The *suka kollu* project incorporates two principles of environmentally sound agricultural practices.

- The method involves *sustainable* use of the land. This means that the health of the environment is not depleted in the process of farming it. This knowledge of sustainable agricultural use of wetlands can be applied in many regions of the world.
- Raised field agriculture preserves *biodiversity*, or the natural variety of native plant and animal species. This variety is vital to maintaining healthy ecosystems. As the Hopi and Aymara have known for centuries, healthy crops are the result of constant, balanced interaction

Figure 19

Farming is a community occupation for the Aymara. Here, community members work together to reconstruct an ancient field. Photo by Alan Kolata, courtesy Smithsonian Institution.

among plants, insects, climate, and soil. Native plants are naturally resistant to harmful insects and disease; they are naturally adapted to the altitude, temperature, and moisture of their native region.

By reclaiming ancient farming methods uniquely suited to their environment, the Aymara people increased food production. At the same time, they rediscovered cultural knowledge and pride lost to them during years of political and economic oppression. Now the Aymara are learning of the great achievements and contributions made by their ancestors. The architects of the Tiwanakan state were expert hydrologists who built great cities equipped with elaborate plumbing systems. Art, religion, and education flourished. Well-equipped armies established trade routes and expanded the state's boundaries.

But agriculture was the activity that connected the people with the earth and with each other. This is true today as well. In the Andean highlands, food creates a bond between a community and its deities. Food links communities that grow potatoes in the higher-altitude regions with communities in lower and warmer lands that cultivate corn and other temperate-zone crops (see Figure 21). Fishermen trade with farmers. Family members who migrate to rainforest regions send tropical fruits and vegetables back home. Andean farmers are finding a market for quinoa (kee-no-wa), a protein-rich seed sacred to the Incas,

Figure 20

The suka kollu *yields tons of potatoes, a staple food for Andean people. Photo by Oswaldo Rivera Sundt, courtesy Smithsonian Institution.*

among health-conscious consumers (see Figure 22). Native American crops such as corn and potatoes now feed billions of people throughout the world.

Native American food crops such as corn, potatoes, sweet potatoes, tomatoes, peanuts, manioc, cacao, and many kinds of peppers, beans, and squash were unknown in other parts of the world before the 16th century. Make a list of all the dishes you can think of that use these foods.

OR

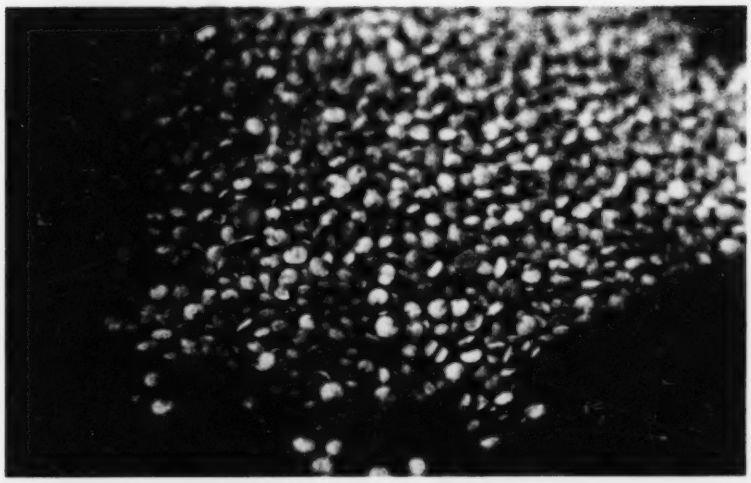
How did potatoes, a food crop unknown in Europe before the 16th century, become so important to the Irish? We know that after the Spanish conquered Peru in 1536, potatoes were used to feed sailors on ships that traveled from Peru to Spain via the Straits of Magellan. Little is known about how potatoes were introduced to Irish farmers, but what history doesn't tell us, your imagination can! Write a story, including maps and illustrations, that explains how potatoes got from Spain to Ireland.

Like the Hopi, Andean farmers take advantage of the unique conditions of their environment to preserve food for future use. Freeze-drying is a technique naturally suited to the cold, dry Andean highlands. Tubers such as potatoes and oca, *leafy greens, and meats are preserved by freeze-drying.*

Chuñu, freeze-dried potatoes used in many staple dishes, will keep for years if made well. In ancient times, *chuñu* were used as currency. The preparation of *chuñu*, like most Aymaran agricultural and food activities, begins with a ceremony asking for the assistance of the deities. In June or July, the months of coldest, driest weather, potatoes are laid out in a single layer on a clearing covered with dried grass. A paper flag marks the spot, calling the deities' attention to the process. A coca offering is made, and libations (offerings of wine specially made for ceremonies) are thrown toward the four cardinal points of the compass. The potatoes are turned occasionally during a 5-12-day period to insure uniform freezing. During this time, the potatoes become slightly watery, making it easy to separate the skins from the flesh by walking on the potatoes with a special twisting motion. After this, the potatoes are left for 3-4 more days to dry in the cold air. When completely dry, the cork-

Figure 22

Quinoa is a protein-rich seed. Andean farmers have found a market for this native crop as consumers have grown more health conscious. Photo by Jym Wilson.



For the dressing

5 tablespoons fresh lime juice

1 teaspoon salt

1 and 1/4 teaspoons ground cumin

1/3 cup olive oil

In a bowl, wash the quinoa in at least 5 changes of cold water. Rub the seeds gently and let them settle before pouring off most of the water. Repeat until the water runs clear, then drain in a large, fine sieve.

Cook the quinoa in a saucepan of salted boiling water for 10 minutes. Drain quinoa in a sieve and rinse under cold water. Set the sieve over a saucepan of boiling water (don't let the quinoa touch the water), cover with a kitchen towel and a lid, and steam until fluffy and dry, about 10 minutes. Check the water level occasionally and add more water if necessary.

While the quinoa is cooking, toss the beans with vinegar, salt, and pepper in a small bowl.

Transfer quinoa to a large bowl and cool. Add beans, corn, bell pepper, jalapeños, and coriander, and toss well.

Make dressing: In a small bowl whisk together lime juice, salt, and cumin. Add the oil in a stream, whisking as you pour.

Figure 23

Andean participants in the 1991 Festival of American Folklife prepare food made with chuñu, *freeze-dried potatoes. Photo courtesy Smithsonian Institution.*

Drizzle dressing over salad and toss well. Add salt and pepper to taste.

The salad may be made one day ahead and chilled, covered. Bring the salad to room temperature before serving. Serves 4 to 6 as an entree or 8 as a side dish.

Adapted from the July 1994 issue of *Gourmet Magazine*.

TIME OUT

The news article below describes how traditional knowledge is being applied to modern environmental problems in sub-Saharan Africa. As you read the article, compare water and soil conservation efforts in Africa to the *suka kollu* projects in Bolivia.

What do you think an Aymara farmer from Bolivia and a Dogon farmer from Mali would say to each other about the "rediscovery" of these ancient techniques? Would the farmers be male or female? Write a dialogue between the two farmers that reveals their thinking about how these projects affect their families and their communities.

THE WASHINGTON POST
5/12/95

ANCIENT METHODS TO SAVE SOIL:

" A NEW WAY OF THINKING"

By Boyce Rensberger
Washington Post Staff Writer

Between 20,000 and 27,000 square miles of fertile soil, an area roughly twice Maryland and Delaware combined, turn into barren wasteland each year in food-short sub-Saharan Africa, according to a report by the International Fund for Agricultural Development (IFAD).

Reduced rainfall is the leading cause of land degradation in some parts of Africa. But in all parts, a major contributor is the loss of many successful land-management practices that African farmers developed over millennia, including ways to cope with drought. These ancient methods of conserving soil and "harvesting" water were largely stamped out—first by colonial masters who thought they knew better, and more recently by wrong-headed advice from outside experts.

Now, however, the Rome-based IFAD, which is supported by many governments, has begun a major effort to rediscover the old ways and promote their adoption, often with locally relevant modifications and improvements, throughout the continent.

"There is a revival of trust in African farmers and their abilities," said Bahman Mansuri, director of IFAD's Africa division. "This is a new way of thinking. We're not developing these approaches in big research centers. We're looking for them in farmers' fields." And IFAD workers are finding them.

In Mali, the Dogon people have long made a practice of heaping weeds in many small piles among the crop plants and covering them with soil. The piles slow the rate of runoff and maintain soil fertility by acting as miniature compost heaps. Where the land slopes more, the Dogon make rows of loose stones that follow the contour, much as tractors do in this country when "contour plowing." These stone "bunds" slow the rate of runoff and let more of the scarce water soak into the soil.

In Niger and Burkina Faso, farmers know how to rehabilitate

HARVESTING WATER IN AFRICA

Farmers in sub-Saharan Africa are rediscovering ancient techniques of soil and water conservation—low-tech methods that work when fancy, high-budget methods usually fail. Among dozens of schemes are these, both of which allow bigger harvests from lands that would ordinarily not receive enough water for farming:

CONTOUR STONE BUNDS ▶ OF BURKINA FASO

Parallel lines of stones laid along the land's contour slow the flow of rainwater down the slope, allowing more water to seep into the soil.

◀ THE CAAG SYSTEMS OF SOMALIA

A ditch diverts runoff from a gully toward a system of low earthen mounds. Each catches the water, slowing its movement, and then spills it to the next mound.

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barren land by digging numerous small pits about a foot wide and putting manure in each one. The pits catch water and the manure attracts termite species that make elaborate tunnels in the ground, helping break up crusted hardpan. The termites digest the manure and distribute its organic proceeds into the soil. In this way, fields that have been given up as useless have been restored to where they have yielded as much as 900 pounds per acre of sorghum or millet in years with average rainfall.

"There is much wisdom in the traditional practices," Mansuri said. "These are technologies that require no costly investment and they work."

Mansuri, who is in Washington for a workshop on IFAD's program for members of Congress and their staffs, said preliminary efforts have proven that they can stop land degradation and even reverse it, returning marginal lands to productivity.

Land degradation is a problem in many parts of the world, Mansuri said, but IFAD is focusing on sub-Saharan Africa because a higher proportion of Africans live and work on the land than do people of any other continent. More than 80 percent of Africans are farmers and the rapid loss of arable land is a leading cause of poverty. And, on the whole, Africans are the world's most impoverished farmers.

Deterioration of soil also creates what Mansuri called ecological refugees—millions of people who leave their homeland seeking better lives in cities, in other countries or often simply on other land that is not yet useless.

IFAD surveys show that land degradation is most acute not in the sparsely inhabited arid zones, which have been the focus of earlier studies, but in the more heavily populated regions where there is enough rain to farm—but not always. It is also a problem in the highlands of more humid zones where simple soil erosion washes away soil fertility.

Mansuri said previous efforts to aid African farmers have failed for several reasons. The programs were too large and they tried to introduce unfamiliar concepts and practices with a "top-down" approach that ignored the opinions and attitudes of farmers. Some projects even imposed penalties on farmers who refused to go along.

For example, IFAD workers have found that if governments pay farmers to dig or build features intended to conserve land and water, farmers tend to assume that the government is also responsible for maintenance. They regard themselves as laborers, not participants.

If heavy machinery is brought to build some structure, the interested beneficiaries often see the results as alien and refuse to maintain them by hand.

"One of the greatest weaknesses of most large-scale soil and water development projects financed with international support is that they come to a grinding halt as soon as external project funding is withdrawn," Mansuri said. "IFAD's approach avoids this pitfall. It promotes structures which are easily managed and maintained by farmers. We therefore put a lot of emphasis on farmer-to-farmer extension and training."

Mansuri said IFAD's programs take account of the role of women in African agriculture. Traditionally men do most of the work to prepare a field for planting but women maintain the fields, doing virtually all the weeding. In some regions, however, women do virtually all the work.

"What I like to say," Mansuri said, "is that IFAD's role is to help African farmers and their husbands."

RAINFOREST GATHERINGS: TLINGIT, HAIDA, AND TSIMSHIAN SUBSISTENCE

Figure 24

The Tsimshian, Haida, and Tlingit people live in the temperate rain forest of Southeast Alaska.

The mention of rainforests conjures up images of lush, hot jungles teeming with exotic plant and animal life. However, some rainforests exist outside the tropics. Like tropical rainforests, temperate rainforests are characterized by heavy rainfall and abundant plant and animal life. Temperatures are much cooler than in tropical areas, but not as cold as you might expect. The temperate rainforests of Southeast Alaska receive over 150 inches of precipitation annually. Winter temperatures usually stay between 35 and 40 degrees. There is little snow, and temperatures rarely dip below freezing. In summer the average temperature is 66 degrees.

Southeast Alaska is about the size and shape of Florida, but it is not a peninsula. It is an archipelago, or chain of islands, separated by straits and fiords (see Figure 24). The mountainous islands are covered with dense forests of spruce, hemlock, and red and yellow cedar. This is the site of the Tongass National Forest, which covers 17 million acres. A few lowland clearings and meadows dot the islands.

The forests, streams, and surrounding waters support many species of animal life. Salmon and halibut are two of the many types of fish found here. In the summer humpback and killer whales swim through the narrows. Black bears roam the woods. Mink, martens, and otters feed at river banks and beaches. Game animals include deer, moose, and mountain goat. Many bird species, including eagles, cormorants, and herons, inhabit mountains and shores.

Among the many indigenous people occupying Alaska's "panhandle" are the Tlingit (Thleen-git), whose traditional homelands range from Prince William Sound to the southernmost portion of the Alexander Archipelago; the Haida (High-duh), who migrated to Alaska from the Queen Charlotte Islands and the coast of British

Columbia; and the Tsimshian (Sim-shee-an), who migrated from British Columbia in 1887. While the three groups have distinct languages and cultures, they share similar subsistence practices and similar concerns about government policies affecting their use of the land and its resources.

Although Southeast Alaskan Natives do not grow crops like the Hopi and the Aymara, they are physically and spiritually connected to the land on which they live. Their knowledge of their habitat — its seasonal rhythms, the behavior of wildlife, the uses of plants, and the bounty of the sea — has provided these groups with the resources to develop strong societies. This knowledge is also the source of their profound respect for the natural world. Balanced use of natural resources and a social structure which emphasizes exchange of personal resources with relatives and neighbors are evidence of this respect in daily life.

Tlingit, Haida, and Tsimshian people employ a variety of subsistence strategies, including hunting, fishing, and gathering. Ernestine Hanlan, a Tlingit basket weaver, explained during a presentation at the 1991 Festival of American Folklife that use of the abundant natural resources for food, shelter, clothing, tools, and art is so integral a part of the lives of Southeast Alaskan Natives that " . . . there is no word in the Tlingit language [for] '*subsistence.*' To us, it is our traditional and cultural way of living, and it's like breathing and sleeping to us."

In fact, the Tlingit people define themselves by the subsistence activities they have practiced for centuries — the word *Tlingit* means "low-tide activity people." "When the tide is out, the table is set for the Tlingit people" is a saying that underscores the importance of traditional knowledge of Southeast Alaskan waterways. In the spring, herring spawn their eggs on kelp (a kind of seaweed) which is gathered during low tides. Described as "Tlingit soul food," herring eggs on kelp is a favorite Tlingit dish, and gathering the roe-laden kelp "is a cultural and emotional tie to fish, land, and game."

Before contact with Europeans, marine fish, plants, and animals were the major food resources for Southeast Alaskan Natives. Shellfish, seals, sea otters, seaweed, herring, halibut, snapper, cod, and salmon were mainstays of Native diets. Salmon continues to be an essential staple of Tlingit, Haida, and Tsimshian diets. Five varieties of salmon are available in the region (see Figure 25). In early summer, schools of salmon begin to swim upstream to spawn and lay their eggs. This annual run of salmon provides a plentiful and dependable supply of fish. Some families establish riverside camps where they stay through autumn. These camps are convenient locations for catching and processing fish.

Many strategies and tools are used to catch fish, including line-and-hook, netting, spearing, and trapping. Traditionally, trapping was favored, since this method ensured a sizable haul that could be preserved for future use. Rectangular salmon traps were built with wooden slats set in a "V"-shaped weir, with the narrow end pointing upstream (see Figure 26). Heads of households supervised and regulated access to the weirs. Then, as now, fishermen were careful to trap fewer fish in years when the fish population seemed small, to make sure enough fish remained in the waters to breed in future seasons.

Traditionally, men hunted and fished, while women gathered, prepared, and preserved food. Once caught and killed, the salmon was turned over to the women to cook or preserve. Cooking, processing, and preserving the fish require considerable skill and labor. Today, catching and preserving enough fish to feed a family through the winter requires full-time labor from at least two people, frequently a married couple, for two months. A small portion of the salmon catch is cooked for immediate consumption. In the past, salmon was baked in earthen ovens, roasted over open fires, or boiled in bentwood boxes (see Figure 27). For this last method, rocks were heated in a fire, cleaned of ashes, then placed in a wooden box partially filled with water. When the wa-

ter came to a boil, food was added. Watertight cedar-root baskets were also used in this manner. Today, fresh salmon is baked or broiled using conventional kitchen equipment.

TIME OUT

Why was this indirect heat method used for boiling foods rather than placing cooking containers directly on the fire?

Much of the annual salmon catch is smoked to prepare it for winter storage. The fish is cleaned and deboned, then the fillets are sliced into 1/4-inch thicknesses. The slices are hung on racks (see Figure 28) above low-burning fires in specially constructed smokehouses. The spruce wood for the fires is readily available on the river banks. The smoke must be kept constant for 48 hours to ward off flies and dehydrate the fish. After the fish is thoroughly dried, it is immersed in seal or eulachon oil and used for meals throughout the winter. Smokehouses are less common than they once were, but families and communities do continue this tradition. More often, freezers are used to store fish.

Fish parts that are not preserved or eaten immediately are used in other ways. Backbones may be boiled in soup. Heads are baked or fermented to make a strong-smelling food known as "stink heads." Fish

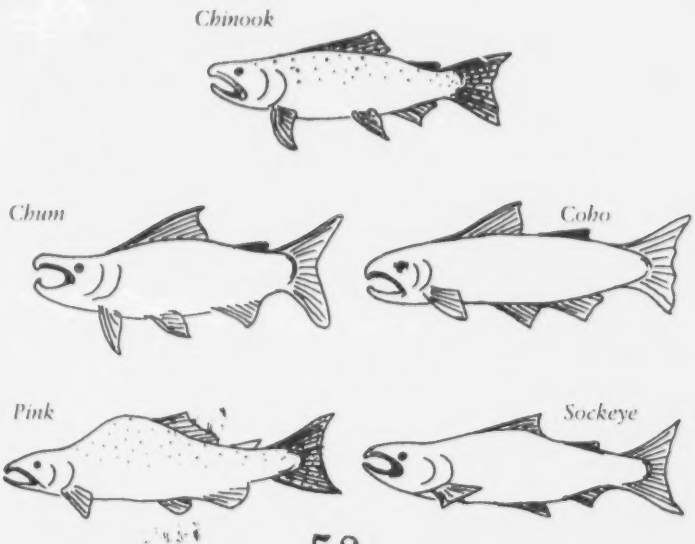


Figure 25

Five varieties of salmon are fished by the Tlingit, Haida, and Tsimshian — Chinook, Coho, Pink, Chum (or Dog), and Sockeye. Illustrations courtesy U.S. Fish and Wildlife Service.

Figure 26

Weirs and traps are used to harvest salmon as the fish make their way upstream in early summer.

Figure 27

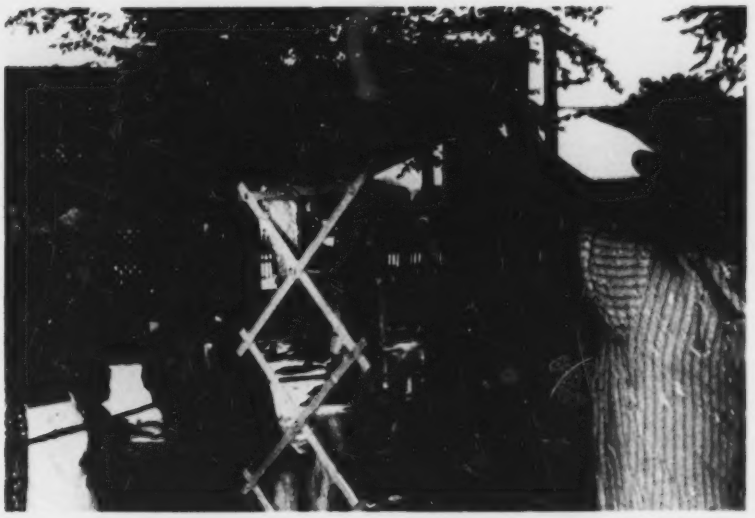
Undecorated boxes made of cedar can be used as containers for cooking.

eggs are served in soup with seaweed or salted to make caviar. Traditionally, the people would return salmon bones to the river from which the fish came so they could float back to their spiritual home, coming back the following season to provide food.

Today, most fish are purchased from commercial fishermen, caught by family sport fishermen, or obtained on subsistence permits. Federal and state fishing regulations limit catches and frequently do not acknowledge that an individual fisherman may be providing food for an extended family. Areas that are designated for subsistence use are often distant from population centers, making those who can least afford it

Figure 28

Mark Jacob, Jr., demonstrates salmon drying techniques during the 1991 Festival of American Folklife. Photo courtesy Smithsonian Institution.



more dependent on retail purchases. Ketchikan has a population of only about 14,000 people. As the fourth largest community in Alaska, it is designated as an urban area, and subsistence fishing is not allowed. Commercial fish hatcheries sometimes give fish away after the eggs have been removed. However, these fish are not firm enough to smoke and become mushy after freezing (Dauenhauer and Dauenhauer 1991).

Fewer young people are learning the skills of catching and preserving fish. Like the Hopi, Alaskan Native elders fear that this lack of knowledge and experience prevents children from learning and practicing traditional respect for the natural world. As a countermeasure, Native and non-Native children can attend fishing camps in the Sitka area where they learn subsistence skills. Young people who comment that the process of catching and preserving salmon is "gross" are cautioned by their teachers "not to make fun of food or animals that are sources of food or you may lose your way" (*A Matter of Respect* 1992).

The indigenous people of Southeast Alaska are accomplished hunters. They skillfully hunt mountain goats, porcupines, bears, and deer as well as sea mammals such as seals and sea otters. The traditional deer-hunting method reveals the Tlingits' familiarity with game

and the hunt. The hunting season begins in early fall. In order to attract deer into hunting range, the traditional hunter uses a deer call made from a dogwood tree leaf. The hunter places a leaf in his mouth and blows through it. The resulting whistling sound resembles the cry of a fawn and attracts mature female deer. Traditionally, hunters used a bow and arrow aimed at the neck or head. This shot caused the deer to die quickly, sparing it unnecessary suffering. As with fish, as much of the deer as possible is put to use. Deerskin is made into drums, moccasins, and vests. Hooves are made into dance rattles.

Sharing resources is an important part of life. Many hunters give away their first kill of the season, believing that this generosity will bring them additional luck. Younger hunters share their meat with elders who are no longer able to hunt for themselves. Fulfilling this responsibility may put hunters at risk with the law. Legal hunting limits do not account for the possibility that the hunter may be providing food for other people. Federal regulations require the State of Alaska to manage subsistence resources. According to Mark Jacob, Jr., a participant in the 1991 Festival of American Folklife, "The State of Alaska developed a sportsman's mentality. In that mentality, a trophy on the wall is more important than putting bread and butter on the table."

While men traditionally do most of the hunting, women are primarily responsible for gathering shore and woodland food sources such as roots and shoots, fish and bird eggs, wild berries, and beach foods such as mussels, crabs, clams, and black seaweed.

Berry picking lasts for two to three weeks in late summer. While fish hang in the smokehouses, women and children spend the day picking in the berry patches. Among the berries collected are salmon berries, elderberries, strawberries, blueberries, and cranberries (see Figure 29).

One way of preserving berries is to use a traditional oven constructed by digging a shallow well in the ground and lining it with

rocks. A fire is made inside the pit, wild berries are put in, a layer of skunk cabbage is placed on top of the berries, and gravel is used to cover the top of the pit. Water is poured over the hot rocks, and the berries are left to steam overnight. The next day, the berries are removed and placed in seal-oil containers bearing clan emblems.

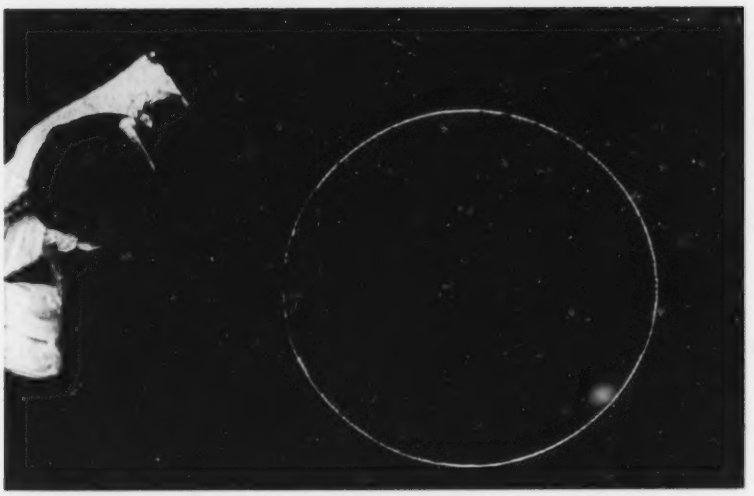
Berries can also be preserved as stew. The berries are placed on the stove in a large pot and stirred constantly. When the berries are almost done, silver salmon eggs, some of which are crushed, are added. Once the berries are soft, they are removed from the heat and poured into a bentwood box lined with skunk cabbage. A layer of cabbage is placed on top of the berries like plastic wrap. Then the box is sealed, bound with string, and kept in the storehouse with the preserved fish.

For Southeast Alaskan Natives, the lives of the people and the animals and plants of the rainforest are closely intertwined. The people do not view animals as lesser forms of life, but as fellow beings who have "body, soul, spirit, abilities and feelings" (Kirk 1986). Animals are "people" who take on their animal forms in the physical world and return to human form when they go back to their homes. Salmon People, Deer People, and Seal People arrive in the physical world according to the seasons, providing food for the humans. The Animal People do not resent this — after their bodies are eaten, their spirits return home where their physical bodies are renewed. Humans know that the Animal People willingly participate in this exchange. Therefore, great care is taken to make sure animals are treated with appropriate respect and reverence. When the salmon arrive in the rivers and streams, they are greeted with words of welcome, such as "We thank you for coming. We have waited a long time. We hope you will bring your brothers and sisters again soon." The hunter always thanks his prey for providing for his family.

Likewise, the plants gathered for food, baskets, or medicines are given ritual greetings of respect and thanks. As she begins to gather

Figure 29

Berries gathered in late summer are preserved—canned, packed in oil, or frozen—for winter use. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.



berries, a South Kwakiutl woman says, "I have come, Supernatural-Ones, Long-Life-Makers, that I may take you, for that is the reason you have come . . . . Look! I come now dressed in my large basket and my small basket that you may go into it . . . . I mean this that you may not be evilly disposed towards me, friends. That you may treat me well." April Davis, Education Specialist for the Ketchikan Indian Corporation, explains such informal, personal ceremonies as "our way of remembering we are part of the earth."

For Tlingit, Haida, and Tsimshian people, cultural identity is inextricably bound to the rainforest and coastal environments in which they live. They believe that when they live in balance with nature and treat the spirits with gratitude and respect, the forests and waters provide them with the resources they need. Today, the intrusion of Euro-American interests and the resulting depletion of fish, forest, and wildlife resources threaten not only the natural landscape but the reciprocal relationships among people, earth, and animals that are vital to these cultures.

TIME OUT

Read below the poem "In Praise of Maize," which celebrates one of the world's most important food crops and the Native people who grow it. Write your own poem about one of the other food staples discussed here. Try to capture the importance of that food to the culture with which it is most closely associated.

In Praise of Maize

BY YVONNE BARON ESTES

We sing a song to the
Indian Farmer
ancient breeder of corn
and to corn herself,
Zea mays,
daughter of Teosinte

O Maize, you strange old grass
with your whispering
tassels, delicate silks
golden yellow seed-pearls
roasted at harvest,
here's to you

We honor your farmers
wielders of digging sticks
devoted selectors
of your seed:
Inca, Maya, Aztec
Olmec, Navaho, Hopi
and many more, for you fed a hemisphere
And we thank those who entombed you
beloved food for ghostly travelers
your ancient
tiny ears
at Tehuacan
growing century by century
to modern corncob size

We cherish countless
patient women
grinding
grinding
grinding
your grains
in heavy stone metates
all over the hemisphere
We see the ruins of Wupatki
abandoned a thousand years
ago, in a drought
only winds

and metates
inhabit them now
We sing praises to
Yum Kax, Tlaloc, Chac
deities of rain and maize
and offer libations of chicha
maize beer
as of old

And we celebrate
popcorn
ancient mountain
corn-feast
of high Andean peoples

Each year now
we anoint fresh sweet garden corn
with butter and salt
and sink into thankful bliss
as of old

We celebrate your many joys, O maize:
tortillas and beans
roasting ears
cornmeal mush
grits and hominy
corn bread
corn muffins
tamales with their corn-husk wrappers
of sweet messy succulence
dripping down our grinning chins
corn fritters
corn squeezin's
johnny cake
corn soup
and microwave popcorn
from Machu Picchu to microwaves —
Great McClintock Jumping Genes!

O Maize,
O lovely child of human care
Here's to you.

From *Cultural Survival Quarterly* (1989).

Suggested Resources

General

Seeds of Change: A Quincentennial Commemoration, ed. Herman J. Viola and Carolyn Margolis (Washington, D.C.: Smithsonian Institution Press, 1991). Examines the dramatic economic, cultural, and biological changes that occurred throughout the world as a result of European contact with the First Americans. Contains excellent essays on pre-contact Native culture and the adoption of Native American food crops throughout the world.

Hopi

Pages from Hopi History by Harry C. James (Tucson: University of Arizona Press, 1974). An accessible history of the Hopi people from emergence through recent times.

Me and Mine by Helen Sekaquaptewa as told to Louise Udall (Tucson: University of Arizona Press, 1969). This life story of a Hopi woman provides a first-person view of Hopi daily life, tradition, and change.

Hopi: Songs of the Fourth World, a video by Pat Ferrero. Available from New Day Film Co-Op, Inc., 22-D Hollywood Avenue, Hohokus, New Jersey 07423 (Tel. 201-652-6590). This award-winning video is a portrait of Hopi people, land, and values. It examines the central role of corn and the land in the spiritual, artistic, and agricultural lives of the Hopi. A resource handbook is also available.

The Hopi is a 20-minute video from the American Indian Video Series by the Museum of Northern Arizona. Scenes of family life and work are accompanied by traditional music and straightforward narration. This video as well as books and recordings are available from the Hopi Arts and Crafts Cooperative Guild, P.O. Box 37, Second Mesa, Arizona 86043 (Tel. 602-734-2463).

Victor Masayesva is a Hopi artist whose videos incorporate computer animation and graphics to translate Hopi myths, rituals, and history. Five productions, *Hopiit; Itam Hakim, Hopiit; Ritual Clowns; Pot Starr*; and *Siskyavi-The Place of Chasms*, are available from Electronic Arts Intermix, 536 Broadway, 9th Floor, New York, NY 10012 (Tel. 212-966-4605, FAX 212-941-6118).

Southeast Alaskan Natives

Alaskan Native Cultures: Tlingit, Haida, Tsimshian, volume 1, ed. Angela Tripp (Santa Barbara, CA: Albion Publishing Group, 1994). This book, through text and beautiful color photographs, celebrates a renewal of interest in traditional dance, art, and ceremonies among Tlingit, Haida, and Tsimshian people of all ages. An excellent source of visual information for students.

Tradition & Change on the Northwest Coast by Ruth Kirk (Seattle: University of Washington Press, 1986). This book describes the history and culture of four Native groups from coastal British Columbia — the Makh, Nuu-chah-nulth, Southern Kwakiutl, and Nuxalk — who share many traditions and practices with Southeast Alaskan Native people. First-person accounts, traditional

narratives, and photographs accompany Kirk's insightful descriptions of life long ago and today.

The Tlingit: An Introduction to their Culture and History by Wallace M. Olson (Auke Bay, Alaska: Heritage Research, 1991). Describes Tlingit history, social organization, subsistence practices, language, and art. Olson's explanation of clan relationships is particularly useful.

During My Time by Margaret B. Blackman (Seattle: University of Washington Press, 1982). The life history of Florence Davidson, a Haida woman born in 1896. Davidson's narrative, along with Blackman's commentary, provides readable insight into changes in Haida culture over the past 100 years.

A Matter of Respect, a video available from New Day Films, Inc. (see *Hopi: Songs of the Fourth World* above), focuses on the subsistence practices of the Tlingit people. Elders and young people discuss efforts to preserve traditional ways in a changing economic and environmental landscape.

Aymara

Mountain of the Condor by Joseph W. Bastien (St. Paul: West Publishing Co., 1978). Bastien lived among the Aymara of Kaata, Bolivia, for one year. His book describes the Aymara people through examination of the religious symbols and metaphors that govern daily and ritual life. While Bastien observes life in Kaata as an anthropologist, his account is personalized and affectionate. Older students will enjoy excerpts that give names and faces to the people of the *altiplano*.

ART AND IDENTITY

Teacher Preparation

The material objects produced by cultural groups — tools, toys, cookware, weapons, clothing, etc. — provide anthropologists, folklorists, historians, and archeologists with visual information that serves as clues to the practices and beliefs that give each culture its identity. Just as a T-shirt — whether it communicates a political message, announces allegiance to a sports team, or displays a designer logo — links the wearer with a particular group, a basket, a clay pot, or a woven belt can tell the story of the culture from which it comes. Its function, design, and materials reveal where, how, why, and when the object was created and used. When such an object is decorated with symbols of religious belief, family relationships, or important events, it also tells us about the traditions and values of the group. An object fashioned by hand also tells us about the imagination and skill of its maker.

Traditionally, members of subsistence cultures produced not only the food that served their nutritional needs, but also made the tools and containers necessary for processing, storing, and serving that food. They produced the plant and animal fibers that were woven into cloth, and sewed the clothing they needed for daily and ceremonial wear. Considerable time was devoted to making these items, and considerable effort was made to teach craft skills. Even though most handcrafted objects had a practical use in meeting the rigorous demands of daily life, making such objects also created opportunities to beautify the world and to honor the providing earth by embellishing objects

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with symbols of the natural world. It seems that humans have as much need for beauty as they do for food, as much need to stretch the imagination as to exercise the body. Therefore, making a serving ladle from a piece of wood is a practical activity resulting in a useful tool. Decorating its handle with delicate carving is an act that satisfies the creative urge of the maker, and brings aesthetic pleasure to those who use it.

Examining the crafts of indigenous groups such as Hopi, Andean, and Southeast Alaskan Natives gives students the opportunity to consider how traditional knowledge of the natural world is used to create useful and beautiful objects. Students will learn to "read" the clues provided by materials, designs, and decorations to come to reasonable conclusions about the values shared by these cultures. These observations can be added to the concept map suggested on p. 10.

Focus Questions

How are craft skills and knowledge of natural resources gained and shared?

What are the aesthetic and practical functions of crafts in subsistence cultures?

How are Native American relationships with the land manifested in the design and construction of crafts?

Suggested Activity

If possible, take your class to visit a history museum for a presentation on how historians, anthropologists, etc., use objects to learn about cultures. If a field trip is not possible, check to see if your state historical society or the museum of your choice offers educational kits for loan or rental. Many such kits contain objects which students can hold and touch, along with activities designed for various grade levels.

Suggested Activity

Ask students to bring an object from home that is meaningful. The object could be something handcrafted by a family member, a keepsake, a souvenir. Explain to students that the purpose of this activity is to closely examine an object to determine what information it reveals about the culture from which it comes. It might be helpful to compare this observation to the interview process used to get information about another person. The following list of questions can be enhanced with student-generated questions:

How was the object made?
By machine or by hand?

Who made it?
What skill or training was required?

What is it made of?

Who used it?
Was the user male? female? a child? an adult?
To whom does it belong? to one person or a group?

What is it used for now?
Was it ever used for some other purpose?

How old is it?
How do you know?

Are there other objects just like this one?
How do you know?

Are there any symbols, colors, or designs on the object that give it special meaning?

Is the object connected in some way to a special person or event?

Once students have written answers to these questions, they can work in small groups to review their information and help each other come to conclusions about the object and the culture that made it. Then, ask each student to write a description of his or her object to accompany a museum display.

HOPI POTTERY

Hopi women have made pots, utensils, and ceremonial objects from clay gathered from the earth surrounding their villages since at least the 13th century (see Figure 30). Most of the ceramics they made were for domestic use — stew bowls, serving bowls, jars, and bottles. Some pieces were made specifically for barter. A potter might trade her wares for baskets or offer them in payment to the medicine man.

Pieces might be offered as gifts. These activities continue today. For instance, Lucille Namoki, a potter living in Kykotsmovi, Arizona, made a set of bowls which were used to pay for her daughter's wedding clothes.

Figure 30

Hopi potters use materials gathered from the land to make their famous pottery.

With the establishment of trading posts in the 1900s, pottery became a kind of currency that could be traded for goods brought to the Southwest by Anglo traders. At that time, potters began making ceramics that appealed to the traders and their white customers, for whom collecting of Native American arts had become fashionable. Later, when the construction of railroads brought white tourists to Native American lands in the southwestern United States, demand for Native pottery increased, and many potters began devoting a significant amount of their time to producing ceramics specifically for tourists. Thus, pottery making became an avenue toward Hopi participation in the cash economy. It continues to be a significant source of income for many Hopi today. Other Hopi potters viewed any activity that led to economic dependence on Anglos as detrimental to Hopi culture. These traditionalists continue to make pottery primarily for their own use. Over the past twenty years, Hopi men have joined women in the production of pottery for sale to tourists and art collectors.

Whether pottery is made for home use, for trade, or for sale, the process of creating it connects the maker with the natural and spiritual elements of the Hopi world. From finding sources of clay through firing the completed ceramic form, the potter is immersed in the materials of the northern Arizona landscape and the visual symbols of agriculture and ritual life. Ancient knowledge of the land and generational teaching of the potter's art come together in a personal ritual full of cultural meaning. Jake Koope, a 24-year-old potter from First Mesa, explains that pottery making is a process in which the mind, the heart, and nature are intertwined. If at any point this balance is disturbed, the pottery will fail.

Gathering Clay

All of the potter's tools and materials are taken from the earth. The process begins by gathering clay from deposits below the mesas. Most

Figure 31

Potters follow a series of careful steps to create containers and utensils for home and ritual use.

pottery is made during the summer and fall, so large supplies of clay are gathered in the spring. Potters who will make many pieces to sell to dealers and tourists enlist the aid of family members to dig the clay and load it onto the bed of the family truck. Bertha Kinale from the village of Walpi on First Mesa joins her husband on his early morning walks to their corn fields below the mesa. While he hoes the fields, she gathers the clay she needs for several days of pottery making.

Hopi potters use two types of clay to form pots and other vessels. Pottery made from yellow clay becomes red after firing. Pottery made from gray clay has a "bleached" appearance after firing. Kaolin, a very fine clay gathered from Oraibi Wash, is used to make a white pigment for ceramic glaze. A potter determines whether the clay is of good quality by tasting it frequently during gathering. Good clay has a slightly sweet taste; bad clay tastes salty and acidic. Sticks, stones, and other foreign objects are removed from the clay as it is gathered.

Once the potter has the new supply of clay at home, she uses a hatchet to break up the lumps. Smaller foreign objects and impurities are removed. The clay is placed in a large container, covered with water, and left to soak for a day or so. As the clay soaks, leaves and roots rise to the surface and are discarded with the water. This process is repeated five or more times over a period of ten days to a month. Once the clay appears to be free of organic impurities, it is poured through cheesecloth to remove small pebbles and grit. When the clay is left in a cool, shady area for 12-24 hours, it develops a rubbery consistency and is ready to use.

Forming Shapes

Hopi potters do not use wheels to "throw" the clay into a symmetrical shape. To form a small bowl the potter begins by kneading a lump of clay to remove trapped air, occasionally adding small amounts of water if the clay seems dry. Then the clay is molded in the palm of the hand, pressed, and smoothed outward until the desired size and shape are achieved. One potter uses her bent elbow as a form for small bowls. Larger pieces are made by stacking coils of clay onto a formed base. As each coil is added, it is smoothed into the one below. A dried gourd shell is used to smooth and shape the interior and the exterior of the pot. A final coil is added to create a rim.

The weather and the potter's judgment determine how long the pot will be left to dry. Pots that dry too quickly in the arid Arizona climate may crack. Hopi potters who came to the 1991 Festival of American Folklife to demonstrate their craft could only approximate the process in the humidity of a Washington, D.C., summer. Pottery made at the Festival was dried in an electric kiln borrowed from a local potters' workshop.

When the pot is dry, it is scraped if necessary to create a uniform thickness. Then the entire surface of the piece is smoothed using a rounded piece of sandstone or sandpaper. Some potters "slip" or coat

Figure 32

Tessa Taylor uses sandpaper and a polishing stone to smooth a small pot. Her teacher is Lucille Namoki, her grandmother. Photo by Donelle Blubaugh.

the smoothed pot with kaolin.

The next step is to polish the pot with a small, smooth, riverbed stone. Some potters use commercially polished stones. The pot is rubbed with the stone, one small section at a time, until the entire surface is burnished (see Figure 32).

Decorating

Most of the pottery made for home use or local barter is not decorated. Pieces intended as gifts or those to be sold are usually decorated with paint. A few potters add decoration by manipulating the clay to create textured or appliquéd designs.

The black paint that lines most decorated pots is made from a green, leafy plant the Hopi call "wild spinach." Plants are collected in the spring — sometimes by the pick-up truck load. Leaves are boiled and eaten like spinach or chard. The cooking liquid and plant stalks are boiled until the liquid is reduced to a syrup. The solids are removed, and small amounts of the liquid are placed on corn husks to dry. This "wild spinach concentrate" becomes very hard as it dries. To make paint, the potter dissolves a piece of the hardened substance in a small container with water. When the potter is ready to decorate her pots, she pours a small amount of the greenish-black liquid onto her stone palette and mixes into it a bit of hematite cement that improves the paint's consistency and helps it adhere to the pottery.

Figure 33

The yucca plant provides fibers to make tiny brushes for painting pottery designs.

The paint is applied using brushes of varying widths made from spikes from the center section of yucca plants (see Figure 33). To make a brush, a spike is cut on both ends to a length of about 3 1/2 inches. One end is chewed until it is frayed. Then fiber strands are removed until a brush of the desired width remains. The thinnest lines are painted with a single yucca fiber. The potter keeps her brushes flexible and moist by sucking on them at intervals during the painting process, much like an oboist prepares a reed for playing.

The black painted outlines that form the pot's basic design may be

Figure 34

Designs commonly used to decorate Hopi pottery are emblems of the natural world and spiritual beliefs.

applied freehand or with the use of a paper pattern. The outlines may be filled in with black paint or with red or white clay paints. A match stick dipped in paint will create a stippled effect.

Hopi pottery, like silver overlay jewelry, baskets, Kachina dolls, and other craft objects, is decorated with motifs representing objects, places, and events of the Hopi spiritual and natural worlds. Kachina figures and clan emblems are common. But the motifs most frequently used relate to those elements that also preoccupy Hopi farmers — water, sun, and corn. Some of the motifs commonly used to decorate Hopi pottery are shown in Figure 34. In Figure 35, a Hopi potter paints with a yucca-stem brush.

TIME OUT

Ask students to guess what objects or events are represented by the motifs shown in Figure 34. Students could work together in small groups, using shared knowledge about Hopi culture and land to support their guesses. While students won't be able to name the specific

Figure 35

To paint narrow lines, Lucille Namoke uses a tiny yucca stem dipped in paint made from wild spinach leaves. Photo by Donelle Blubaugh.

identities of figures from the Hopi spirit world, they can guess the roles represented.

Key: a. whirlwinds to bring rain clouds, b. lightning, c. water waves, d. rain clouds, e. rain, f. prayer sticks, g. altar, h. kiva, i. tadpole, j. friendship or brotherhood, k. corn, l. flute priest, m. bear paws.

Firing

Firing — the process of exposing pottery to intense heat to remove moisture and strengthen the clay — gives the potter her most anxious moments. Much can go wrong during firing, and the potter won't know if she has successfully balanced all the natural and spiritual ingredients until the pot is removed from the fire and cooled.

Traditional firing methods involve several steps, all of them difficult to control. Sheep dung provides the fuel for the high heat (940 degrees Celsius) necessary to make strong pottery. The dung kiln is built on a flat section of rock near the potter's house. A small fire of grass and twigs is built within a rock circle. Then chips of bark-like dried dung are added. Large pottery shards are placed over the fire to make a grate. The potter may fire one large piece or several smaller pieces at a time. Once the pots are carefully arranged on the grate, they may be surrounded with additional shards. This mound is then

completely covered with sheep dung.

The pottery is left in the fire for about three hours. Then the layers of shard and dung are slowly removed. Once the pottery is completely exposed and begins to cool, the yellow clay slowly transforms to deep orange-red. When the pot is cool enough to handle, the potter inspects it for cracks and other flaws. Only then is the potter certain that each step, from gathering clay through firing, has been done correctly.

Today electric kilns are used for firing as often as this traditional method. The dung-fired oven has the advantage of being inexpensive and in keeping with reciprocal exchange between the potter and the earth.

Finishing

If the pottery will be used in a Hopi household, it is coated with sap from *piñon* trees while it is still warm to make it watertight. Bowls are rubbed with sheep fat or commercially prepared lard and then reheated overnight to seal the clay. Some potters use commercial glazes, but these must be fired at very high temperatures in electric kilns.

Just as a Hopi farmer invests cultural meaning in the daily care of his crops, the potter's labor is also a manifestation of the Hopi respect for and dependence on the natural world. In her efforts to form the earth's elements into useful and beautiful objects, the Hopi potter is connected to the artistic and spiritual traditions of her people, the literal substance of the earth, and her own imagination.

TIME OUT

Arrange to visit a local potter's studio for a demonstration of the pottery-making process.

OR

Compare traditional Hopi methods with those of other cultures, making note of how environmental characteristics influence methods and materials.

OR

Explore ways that culturally specific symbols are incorporated into the crafts of other cultures. Ukrainian Easter eggs and Pennsylvania Dutch hex signs are two examples.

OR

Perhaps a local potter or art teacher can visit your class over a period of time to help you make your own pots. Decorate your creations with symbols related to your cultural or ethnic background.

ANDEAN WEAVING

For thousands of years weaving has been a significant part of Andean life. The cloth produced from alpaca, llama, vicuña (all animals native to the Americas), and sheep fibers provide the people of this high, chilly region with versatile, warm clothing (see Figure 36). Textiles serve important social and economic functions as well as practical ones. Before the Spanish Conquest, weavings were the most highly prized possessions in the Andean world, traded regularly along the routes established by the Tiwanakan and Incan civilizations.

Figure 36

Andean weavers make warm, versatile clothing from llama fibers. Photo courtesy Smithsonian Institution.

Warehouses filled with fine textiles were among the treasures Spanish conquistadors found in Urubamba, the sacred valley of the Incas. Social and political status was indicated by materials and designs. Special textiles were made for social and religious ceremonies. The art of weaving was so highly regarded by the Incas that a textile deity, Aksu Mama, received sacrifices in yearly ceremonies.

Archeologists, anthropologists, and historians have learned much about the social and political history of Andean culture by examining the methods and designs of textiles and clothing. Virtually every technique known to modern weavers was known by weavers 3,000 years before the Incas conquered the region. Designs common to textiles found in the ruins of the pre-Incan civilization of Tiwanaku were incorporated into Incan designs. The vibrant colors of contemporary Andean textiles stem from dyeing techniques perfected by the Incas. Modern styles incorporate spiritual symbols of the ancient Aymara, the Incas, and the Spanish.

While the Spanish Conquest destroyed the complex economic and social order of the pre-Columbian world, weaving remains, along with agriculture and herding, at the center of economic and social activity. Nearly every event in Andean life is accompanied by a weaving-related activity. Among the Aymara of the Bolivian *altiplano*, children are given responsibility for herding when they are as young as three. This passage into active participation in the economic life of the *ayllu* — the group of people living in the same territory — is marked by giving the child his or her first haircut and presentation of his or her first set of adult clothes. Girls, who learn to weave when they are six or seven years old, weave headbands and belts to attract young men. A young man proposes marriage by weaving a special belt for the young woman he wishes to marry. His proposal is accepted if he receives a *chu'spa*, a small woven bag used to carry coca leaves. The dead are buried with the weavings that clothed them in life.

TIME OUT **How is clothing used to mark special events in your culture?**

Just as Andean agricultural practices and products vary from region to region, the materials and designs of textiles vary according to the location and traditions of the cultural groups that produce them. Therefore, textile designs and clothing styles are important indicators of cultural identity. For example, the woven overskirts, or *axsus*, worn by women from the Jalq'a region feature brilliantly colored creatures from fantasy and myth, randomly arranged on dark backgrounds. Those made and worn by the Tarabuco feature tiny, symmetrical designs depicting events and objects of everyday life (see Figure 37).

But whether weavers are Peruvians from the Lake Titicaca island of Taquile or Jalq'a from Bolivia's southern border region, they share a tradition that relies on ancient knowledge and indigenous materials to produce clothing and ceremonial textiles that reflect close ties to the natural world. Just as the painted symbols that decorate Hopi pottery communicate respect for and dependence on plants, rain, and Hopi deities, Andean textiles incorporate designs that illustrate details of the region's physical and spiritual existence.

The Fibers

The native *camelidae* — the alpaca and the llama — of the Andes provide weavers with an abundant supply of wool. Alpaca wool is highly prized for its lightweight warmth and silkiness. Llama wool is heavy and durable. The vicuña, another native *camelid*, is an endangered species whose luxurious wool was once reserved for use by Inca royalty. Sheep were introduced into the Andes by the Spanish, and today most Andean textiles are woven from sheep wool. Today, synthetic fibers such as acrylic, orlon, and rayon are widely available. Using these fibers saves Andean weavers time and money, but such fibers are not as durable as natural ones, and in areas where synthetics are used frequently, traditional knowledge and skill have been lost.

Figure 37

(Top) Textile designs are important symbols of cultural identity in the Andes. On the left, a woman from the Tarabuco region of Bolivia wears an overskirt depicting events and objects of daily life. (Top right) The weaving produced by the Jalq'a features creatures from fantasy and myth. Photos by Jym Wilson.

Figure 38

(Left) A weaver from the island of Taquile in Lake Titicaca uses a drop spindle. Photo by Olivia Cadaval, courtesy Smithsonian Institution.

Figure 39

(Above) Juliana Rodriguez, a Jalq'a weaver, prepares dye for coloring sheep's wool. Photo courtesy ASUR.

In ancient times, fibers were twisted by hand to make thread and yarn. Use of the drop spindle (see Figure 38) adds speed, but this type of spinning is still a time-consuming process. The drop spindle is still widely used in rural areas. On the island of Taquile in Peru, men carry their drop spindles constantly, spinning as they walk to and from the fields or chat with companions.

Making Thread

The Spanish introduced the spinning wheel, which was more readily adopted in areas where textile production dominated agriculture as an economic activity. Where agriculture is the dominant activity, weaving is postponed during the busy months of planting and harvesting. Drop spindles and back-strap looms are easily transported to grazing land, where women spin and weave while watching over sheep and alpaca herds.

Today in the Jalq'a and Tarabuco regions of Bolivia, weavers involved in a project designed to revitalize weaving traditions and create locally controlled sources of income also use spinning machines powered by electric motors. These machines can generate about 600 grams of wool thread per day compared to the 100 grams that can be made by hand.

Creating Color

Many Andean textiles take advantage of the range of alpaca, llama, and sheep coat colors. Pure white, pale tan, dark brown, gray, and jet black wool are used without dyeing. The Andean people are fond of vibrant colors, however, and dyeing provides colorful threads that are visually pleasing and symbolically important. Early weavings show that the ancient Peruvians used a wide range of colors. Much of the knowledge used by these weavers is now lost, but dyeing techniques used by the Incas do survive (see Figure 39, page 83). Quechua, the language of the Incas and one of the official languages of modern Peru, contains detailed terminology related to dyeing processes.

Achieving the vibrant reds, blues, greens, pinks, and yellows of traditional textiles requires extensive knowledge of Andean plant life. The plants used vary according to region. Several hundred different plants are used to make dye throughout the Andes. Leaves, fruits, seeds, lichen, tree bark, and roots are used. Almost any plant can be used to add color to cloth, including potatoes, corn, walnuts, and berries.

The cochineal, an insect that lives on the leaves of the nopal cactus, is the source of pink, red, and black colors.

Mordants are substances added to the dye bath to fix the colors to prevent fading. Mordants include alum, human urine, salt, ash, and lime juice.

Below (Figure 40) is a table showing a few of the natural dyes used to color the hand-spun wool before it is woven into cloth.

Figure 40

DYE SOURCE		PART USED	COLOR
Native Name	*English Name*		
Aliso	Alder	Leaves	Yellow/green
Antaco	—	Roots	Green
Ayrampu	Barberry	Fruit	Blue
Cáscara de Cebolla	Onion	Skin	Yellow
Chapi	Bedstraw		Red/brown
Cochinilla	Cochineal		Pink/red/black
Eucalipto	Eucalyptus	Leaves	Gold/brown
Hierba Santa	—	Fruit	Blue
Liquenes	Lichen	Plant	Yellow/brown
Pachamarca	Marigold	Leaves	Orange
Salvia	Sage	Leaves	Yellow

Adapted from M.S. Fini, *The Weavers of Ancient Peru* (1985).

TIME OUT

You can make natural dyes to color clothing or eggs or to use as paint from plant materials easily gathered from your garden or kitchen. Here are some of the colors you can make:

Color	*Material*
Yellow	**Goldenrod, sassafras flower, pomegranate rinds, onion skins, willow tree leaves, marigolds, orange peels**
Red	**Cherries, birch bark (gathered from the ground)**
Rose	**Willow bark (gathered from the ground)**

Color	*Material*
Purple	Blackberries, elderberries
Blue	Red cabbage leaves, sunflower seeds
Green	Carrot tops, grass clippings, spinach, moss
Tan	Walnut shells, tea leaves, instant coffee

To make dyes from any of these natural materials:

• Cut or tear the plant materials into small pieces and place in a large pot.

• Add enough water to cover the material.

• Bring this to a boil. Boil for 5-20 minutes, depending on the color intensity you want.

• Cut the top off a plastic jug. Strain the plant/water mixture into the jug through a piece of cheesecloth.

• Add a tablespoon of vinegar to the mixture. The vinegar acts as a mordant, or fixative, to make the color last.

• Reheat the dye bath in a large saucepan.

• Check the color of your dye by dipping cotton fabric, yarn, or paper into it.

• When you've made a color you like, simmer the material you are dyeing in the dye bath until it achieves the color intensity you desire. Stir or turn it often to be sure the color covers evenly.

• Remove the material from the dye bath and rinse it in fresh water until the rinse water becomes clear. Spread the material out and let it dry.

If you are unable to gather natural plant materials for your dyes, purchase frozen or canned berries or vegetables to create the dye. Add 2 teaspoons of vinegar to the liquid from a can of beets. Thaw frozen berries and press out the juice.

Experiment with other plants to find out what colors can be made.

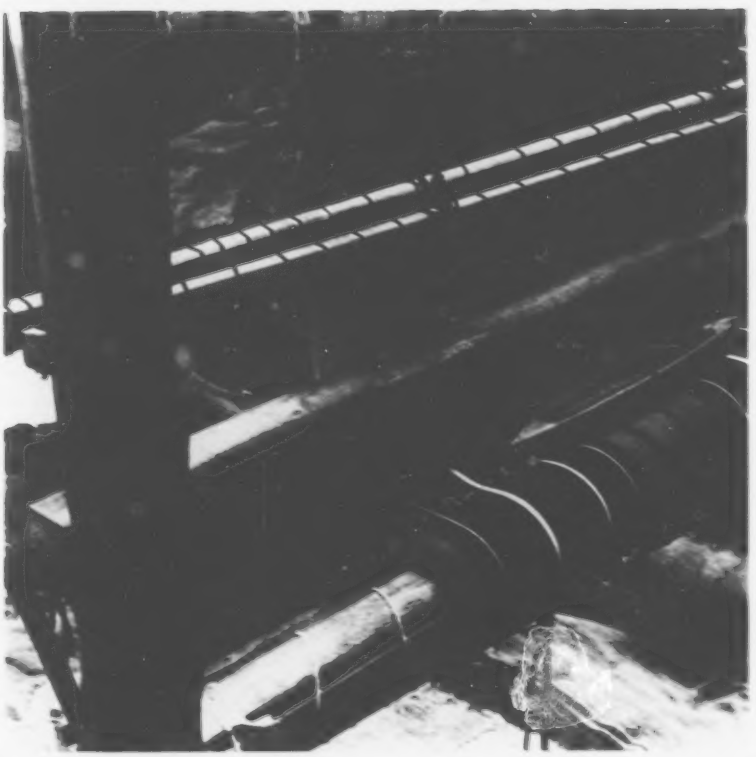
Your dye can also be used like watercolor paints.

Adapted from Laurie M. Carlson, *EcoArt! Earth-Friendly Art & Craft Experiences for 3- to 9-Year-Olds* (1993).

Aniline, or chemical, dyes were introduced by Europeans late in the 19th century. Unlike natural dyes, aniline dyes are consistently available and require little preparation. They are cheap in relation to the human labor required to gather and process the ingredients for natural dyes. Consequently, many weavers welcomed this innovation and

Figure 41

(Top) A young woman from Taquile uses a horizontal loom to make a belt. (Bottom) Yardage and tapestries are made on large vertical looms. Photos by Elayne Zorn, courtesy Smithsonian Institution.



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adopted aniline dyes to the exclusion of natural ones. As a result, in some areas only the oldest women remember how to make dyes from plants and insects. In recent years, demand for naturally dyed textiles has increased along with the demand for Andean textiles in American and European markets. Programs such as the one sponsored by ASUR (Antropólogos del Sur Andino, or Anthropologists of the Southern Andes) help Jalq'a and Tarabuco weavers revive traditional techniques and encourage economic independence through use of indigenous knowledge.

Weaving

As in pre-Columbian times, back-strap looms and horizontal looms are the tools most widely used for weaving thread into cloth. Both are portable. The horizontal loom (see Figure 41 top) is made from four stakes driven into the ground which anchor two parallel bars. The warp, or vertical, threads are stretched between these two bars. The size of the loom is determined by the distance between the four stakes.

Back-strap looms are used for smaller pieces. One end of the loom is attached to a tree or post, the other is attached to a strap belted around the weaver's lower back. The weaver tightens or loosens the weave by moving backward or forward. Because the width of the loom is limited, narrow headbands and belts are usually made on back-strap looms.

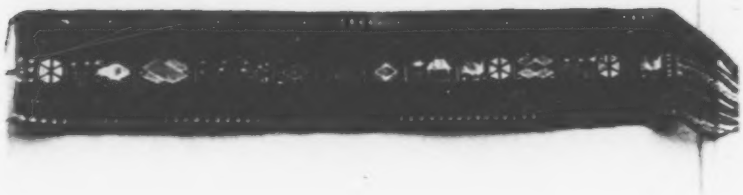
Generally, women make the colorfully decorated accessories mentioned above, while men are the primary weavers of the plain, black yardage used for shirts, skirts, and trousers. They use treadle looms (see Figure 41 bottom) introduced by the Europeans which can accommodate larger fabrics. Vertical looms are also used for large textiles such as tapestries.

Designs and Symbols

Before the Spanish Conquest, no writing systems existed in the central Andes. Instead, visual symbols called pictographs (pictures which rep-

Figure 42

Symbols of stages in the agricultural cycle on the island of Taquile decorate this chumpi. *Photo by Jym Wilson.*



resent an idea or thing) were used to communicate information. For example, stones were carved with figures thought to have magical properties. These figures were related to the constellations and may have been used to make astronomical predictions. Visual symbols were common in the designs that decorated clothing and ritual textiles. Today's weavers draw upon these ancient symbols and incorporate new ones.

The symbols that decorate Andean clothing represent the things that are of importance to the community. Plant and animal motifs, religious and mythical figures, and representations of the physical and social environment abound on *ponchos*, *mantas* (shawls), and *chumpis* (belts).

Chumpis provide a good example of the significance of clothing in the social and spiritual lives of the Andean people. These wide, closely woven belts have a decorative function, carry important visual symbols, and function themselves as symbols.

Women give birth lying on a *chumpi*, and the baby is wrapped in a special, soft *chumpi* called a *walt'ana* to ensure healthy growth. Sometimes *chumpis* are placed on sacred mountaintops, their distinctive designs intended as messages for the gods. At wedding festivals the groom might use a *chumpi* to "lasso" the bride. In some areas, such as the Lake Titicaca island of Taquile, specific woven patterns and motifs identify the wearer as coming from a particular community.

One type of *chumpi* called a calendar or agricultural belt is unique to Taquile Island. The symbols woven into these belts represent stages

in the island's agricultural cycle and illustrate the island's environment and the supernatural forces that shape island life. Like the *Farmers' Almanac* consulted by many American farmers and gardeners, the belt serves as a reminder or schedule of agricultural activity. It also communicates seasonal signs or omens used to forecast weather and determine planting patterns (see Figure 42).

The calendar is divided into twelve sections, each bearing a symbol associated with the agricultural or ritual activity of a specific time period. Common symbols and interpretations are shown in Figure 43.

TIME OUT

Consult a *Farmers' Almanac* or another source of weather and agricultural lore. You will find information about the signs — weather patterns, astronomical information, and animal behavior — that some farmers use to guide their decisions about planting and harvesting. Create a series of pictographs representing these signs and stages in the agricultural cycle specific to the area in which you live. Design your own agricultural belt using these symbols.

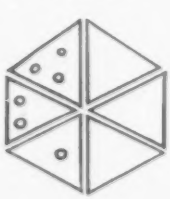
TIME OUT

Perhaps a member of your family enjoys a textile craft such as quilting or embroidery. Explore how these activities incorporate family or cultural symbols.

By decorating their clothing and other textiles with cultural symbols of agricultural and ritual life, Andean weavers provide an important record of the events and beliefs that give each culture its unique identity. When young girls learn to weave at the age of six or seven, they also learn the meaning of the pictographs and colors worn by the members of their families and communities. In many Andean communities, economic and political upheaval have interrupted the traditional

Figure 43

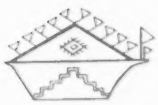
From The Weavers of Ancient Peru *by M.S. Fini (London: Tumi, 1985).*



Musok Huata Kallary– 'The new month'
This period relates to the rotation of crops and is represented by a hexagram of six *suyos*, the six regions which historically divide Taquile. Three of these suyos are identified with dots which indicate that these will be ploughed to produce oca, potatoes and grain. The other sections . . . remain fallow.

Ttecay Guella– 'The month of flowers'
This period is represented by a section of ploughed 'suyo', *chakmay*, a small bird, *Chinuaco* and a *Rosas altar*. The chakmay represents the readiness of the soil for cultivation. The rosas altar probably refers to the festival of the 'Virgin of Candelara'. The crying of the 'chinuaco' means a cold year ahead.

Huata Yupaskq Quilla
The tenth period is represented by the *Chaska*, a bright star with four smaller stars in its centre. It refers to the bright constellation seen in the north. To the left of this star symbol is a symbol that represents land which is ploughed, and the dotted symbols refer to the suyos to be cultivated.



Paramanta Huakay Seloman
The symbol of the 11th period *mayo altar*, represented the festival of All Saints. If however the rainy season has not yet begun, sacrifices are made by going to the highest hill in the name of Pachamama. The symbol in the centre of the design is thought to represent mother earth.

Huata Tucuska Japperay Quilla– 'The month of hunger'
The last period is represented by a large bird with her off-spring in front and behind. If off-spring are observed following her and crying this forebodes hunger, because it is interpreted as the need to rear the stock before the next harvest can be gathered. If all the birds are observed in front of the mother bird, good fortune will follow.

Jappman Pahuana Quilla
The third period is represented by a large bird with her off-spring. A large number of off-spring indicates a fruitful year ahead, and a small number a poor harvest. It is further believed that if the off-spring walk ahead of the mother, an early harvest is to be expected and if they walk behind, the harvest will be late.

Chacra Athapey Quilla– 'The month of reaping the fruits of labour'
The forth period is represented by three plants in flower: the potato, the oca and, possibly, the broad bean. If during this period the plants are in flower then an early frost is forecast. Hailstorms are predicted by the flights of birds and their behaviour patterns. If birds are seen sitting on the flowers and looking downwards towards the earth then a bad harvest and hunger is predicted.

Hatun Cusecuy Huakaicha Quilla– 'The month of paying Pachamama, the mother earth'
The fifth period is represented by a symbol similar to that of the second period. A 'rosas altar' represents the festival of 3rd May, 'Fiesta del Cruz'. All marriages take place on this date. The festival celebrating the birth of Taquile also takes place in this period.

Cuska Huata Cusecuy– 'The half year'
The sixth period is represented by a house or *wasi* which may represent the end of the harvest with stacks of produce in the house. The sign *chuño* on the right, may represent the Inca festival of 'inti Raymi', held on 24th June. It is in this period that *chuño*, the dried potatoes, are prepared.

Jallpa Tejray Quilla
This period is represented by *altar wasi*, which is similar to the 2nd and 5th periods. From observations, the 'altar' sign always represents some sort of festival and in this case probably represents the festival of Santiago of Taquile. All agricultural activities have ended and fishing and weaving begin.

Huata Jhahuana Quilla– 'The month to think of the whole year'
This month is represented by the *soche* fish. Here the fishes' behaviour would be used to forecast the coming year. If the eggs of the 'soche' are found in shallow waters, a dry year is expected. If they appear in deep water then much rain is expected.

Sumak Ijuata– 'Better year'
The ninth period is represented by six 'suyos', as is the first period. The previous period of the fish symbol plays an important role in the ploughing pattern of the 'suyos' during the coming year. If the fish laid eggs in shallow water, then rotation of the crops follows the last year's pattern, if not the crop rotation is changed and other crops are seeded.

art of weaving. Where sheep and alpaca herds have been sold because of drought and economic hardship, and where aniline dyes and synthetic yarns have replaced natural dyes and fibers, centuries of knowledge, history, and lore are threatened. Taquile and Jalq'a weavers who attended the 1991 Festival of American Folklife demonstrated how development programs designed to revitalize weaving traditions can strengthen cultural pride and economic security. Read the following articles to learn how such projects help preserve indigenous knowledge.

Ethno-Development in Taquile

Kevin Healy

Peru's Taquile Island, 13,000 feet above sea level, is set against the spectacular mountain scenery of the Lake Titicaca basin. Quechua-speaking Taquileños farm steep, eroded hillsides and catch fresh trout, pejerrey and catfish for their island economy. Some islanders are master boatbuilders for the Aymara and Quechua communities on the Peruvian side of Lake Titicaca.

Taquile's geography and vibrant folk culture attract rugged tourists from around the globe. Over the past 15 years, the island's 1,200 residents have developed a model for Native American community control of tourism, frequently a source of cultural distortions in societies the world over. In Taquile, islander control of tourism has helped them maintain a strong sense of cultural integrity while adding economically to their community. Their local enterprise includes motorboat transportation, housing, restaurants, handicraft stores, a local museum and tour guide services. By working through local families and organizations, islanders maintain a scale of tourist activity consistent with a people-to-people approach and invite visitors to appreciate their local life and cultural values. The workings of this system have ensured an equitable distribution of the economic benefits and dynamic practices of peasant self-management.

Taquileños' everyday attire attests to their weaving tradition.

Combining dominant Inca reds, Andean geometric symbols and other fanciful designs, they are among the best weavers in Peru. As a cottage industry weaving provides economic benefits to everyone on the island. On ground looms women weave woolen belts, bags and ponchos of all sizes, while on treadle looms men weave cloth for peasant shirts. Men also knit vests and stocking caps.

Through their ethno-development strategy of tourism and textiles under Andean community control, Taquile has changed from one of the poorest Lake Titicaca communities to become one of its better-off during the past 20 years. Outside support for Taquile has come from the Inter-American Foundation, a Congressionally supported aid agency, which supports alternative community empowerment projects for socio-economic change.

Kevin Healy was a Peace Corps volunteer on Taquile Island in the late 1960s. He subsequently wrote a book about rural development in Bolivia and since 1978, as a grant officer with the Inter-American Foundation, has been funding alternative socio-economic development projects in the Andes, especially in Bolivia. He has degrees from Notre Dame, Georgetown, and Cornell.

Ethno-Development among the Jalq'a

Kevin Healy

The Jalc'a are an Andean ethnic group scattered among 30 communities in the remote, rugged mountainous area in the Chuquisaca region of south-central Bolivia. Families eke out a living from farming and pasturing and earn supplementary income from low-paying work in the city. Since 1986, this subsistence economy has changed for a growing number of female weavers (now reaching 380) and their families. Together with a Bolivian organization, Antropólogos del Sur Andino (ASUR), and support from the Inter-American Foundation, the Jalq'a's community organizations have begun a revival of a unique textile tradition. The animal motifs are singular among the weaving traditions of thousands of Andean communities: their *ajsus* or women's overskirts depict a dreamlike world of stylized creatures (condors, monkeys, foxes, lions, bats and cows) in reversible images.

In the past, outside commercial pressures eroded handicraft standards, and foreign dealers bought up the remaining fine textiles in the Jalq'a communities. In addition, drought damaged pasture lands, causing a drastic drop in the wool supply.

The weaving revival began as an economic development strategy to reverse the decline in their folk art and to increase cultural self-esteem among the population, creating a base for social change. Weavers together with ASUR have now organized weaving workshops, pur-

chased raw material, acquired dyes, opened a store in the city of Sucre and held exhibits in museums to promote their work throughout Bolivia. As a result, the market demand in Bolivia for their *ajsus* has grown rapidly. The Jalq'a have learned bookkeeping and administrative skills for their burgeoning enterprise through ASUR's multi-cultural community education program. Organizational and business know-how are essential to their ambitious future programs, as are recovery of weaving skills and the maintenance of a strong sense of ethnic identity.

Their weaving revival incorporates an innovative method of using color photographs of Jalq'a pieces obtained from private collections. Jalq'a families use the photographs as guides to recover their rich repertoire of cultural motifs, as they weave for the new community enterprise together in their outdoor patios. They have been successfully creating weavings for sale from these traditional models and drawing inspiration from them for new pictorial compositions.

CEDAR: TREE OF LIFE

In a small clearing in the forest, a young woman is in labour. Two women companions urge her to pull hard on the cedar bark rope tied to a nearby tree. The baby, born onto a newly made cedar bark mat, cries its arrival into the Northwest Coast world. Its cradle of firmly woven cedar root, with a mattress and covering of soft-shredded cedar bark, is ready. . . .

Wearing a cedar bark hat, cape and skirt to protect her from the rain and the cold, the baby's grandmother digs into the pebble sand of the beach at low tide to collect clams. She loads them into a basket of cedar withe and root, adjusts the broad cedar bark tumpline across her forehead and returns home along the beach.

The embers in the centre of the big cedar plank house leap into flame as the clam gatherer's niece adds more wood. Smoke billows past the cedar rack above, where small split fish are hung to cure. It curls its way past the great cedar beams and rises out through the opening between the long cedar roof planks. The young girl takes red-hot rocks from the fire with long tongs, dips them into a small cedar box of water to rinse off the ashes, then places the rocks into a cedar wood cooking box to boil water for the clams her aunt has gathered. Outside the house stands a tall, carved cedar memorial pole, bearing the prestigious crests of her family lineage. It had been raised with long, strong cedar withe ropes and validated with great ceremony. The house chief and noblemen had taken out their ceremonial regalia from large storage chests of cedar wood, dancers had worn cedar wood masks adorned with cascades of soft-shredded cedar bark and performed in front of screens made of cedar planks. Guests had been served quantities of food from huge cedar wood bowls and dishes, wiping their hands clean on soft-shredded cedar bark. . . .

Throughout her life the newborn baby girl, born before the coming of sailing ships from far-off lands, would rely on the magnificent cedar as an integral part of her life on the Northwest Coast. The child would grow up to respect the cedar tree above all others, believing in its spirit and power. She would refer to the cedar's supernatural spirit as "Long Life Maker" and 'Rich Woman Maker," because it provided the necessities for a comfortable and full life.

Her people would travel by canoe on long trading journeys to bring back foods, raw materials and various goods not otherwise available. A large canoe would carry her entire family out to their summer village on the outer coast to fish for salmon and gather other resources that would see them through the winter. Without the nets, traps, weirs and harpoons, all made of cedar, to harvest the salmon, and the large cedar wood boxes in which to store foods for the long winter, her family would have found it difficult to survive. Practical clothing on the raincoast also came from the cedar, as did large structures to house and shelter extended families from the storms of winter and rains of spring. When people died, their remains were wrapped in cedar bark mats, put in cedar burial boxes and sometimes lashed to the branches of a cedar tree. From birth to death, the wood, bark, roots, withes and leaves of the mystical, powerful cedar tree provided generously for the needs of the peoples of the Northwest Coast — materially, ceremonially and medicinally (Stewart 1984).

Figure 44

Cedar trees thrive in the moist, mild climate of the islands of Southeast Alaska, providing materials used in virtually every aspect of Native life.

The passage excerpted above describes more than thirty ways cedar was used by Northwest Coast Natives before European contact in the 18th century. Since that time, motorized fishing boats and ferries have been used more often than canoes. Blue jeans and T-shirts have replaced cedar-bark wraps. But the cedar tree retains its central position as one of the most powerful and versatile economic, spiritual, and artistic resources in Northwest Coast Native life.

Figure 45 (Top right)

Showing respect for what nature provides is an integral part of life for Southeast Alaskan Natives. Holly Churchill, a Haida weaver, greets a cedar tree before stripping a piece of bark she will use to make a basket. Photo by Winona Wallace.

Figure 46

Totem poles are carved with symbols of clan history which communicate and preserve cultural identity. Photo courtesy Smithsonian Institution.

Red and yellow cedar trees (see Figure 44), along with other conifers, thrive in the moist, mild climate of the Southeast Alaskan islands. On the Queen Charlotte Islands, red cedars nearly 1,000 years old reach heights of 230 feet. One giant tree is 14 feet in diameter. Yellow cedars grow to heights of more than 145 feet. Archeologists estimate that people of the region have used cedar planks, tools, and baskets for at least 4,000 years.

This vigor is matched by the cedar's tremendous versatility. Cedar branches and withes (long, slender twigs) are strong and flexible enough to make rope and burden baskets. The inner bark can be processed in a number of ways to make clothing, bedding, and baskets. The light, rot-resistant wood of the red cedar can be easily split to make planks for housing and boxes for storage. Softer than red cedar and less likely to split, yellow cedar is favored for carving smaller objects such as fishing hooks and floats.

In addition to these practical uses for cedar, the tree is the most commonly used medium for Southeast Alaskan decorative and ceremonial arts (see Figure 45). Elaborately carved spoons and bowls enhance ceremonial feasts. Dancers wearing carved masks move to the

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sound of drums made with rawhide stretched over yellow cedar frames. Southeast Alaskan Natives surround themselves with art. Carved and painted boxes, doorways, and murals; carved figurines, rattles, and masks; painted drums; woven and appliquéd ceremonial regalia; delicately dyed and woven baskets — all bear the abstract designs evoking the characteristics of the plants, animals, and spirits of the temperate rainforest and the vivid red, black, and blue-green colors associated with the art of this region.

Of all the practical, decorative, or ceremonial objects made with cedar, perhaps none are more awe-inspiring than the totem poles which tower dramatically in parks and other public spaces in Southeast Alaskan communities such as Ketchikan. These poles — some over 80 feet tall — preserve the upward sweep of the stately cedar in its natural form and stand in testimony to the carver's skill and his role in preserving the heritage of his people (see Figure 46).

Totem poles are not objects of worship; their carved figures do not represent gods. Their function is heraldic, meaning that they communicate family lineages, legends, and histories. For the people of Southeast Alaska, a person's family heritage is one of the most important sources of pride and identity. Poles carved with symbols of clan identity, or crests, were traditionally placed at the entrance to a house, signaling family ownership and history. Most crests are animal figures representing the legendary ancestors of the family or clan. In his book *The Tlingit* (1991), Wallace M. Olson explains that "each clan had its own legend of how it originated and why it had a right to use a certain design or crest. For instance, one clan owns the story of the creation of the killerwhale, and through it, has a right to use the killerwhale as its crest."

A coat of arms is another example of a heraldic art form used to express family lineages and symbols. Use library resources to learn

about coats of arms. In what ways are they similar to or different from totem poles?

OR

Animal figures are frequently used as school or sports team symbols. Explore the history of the adoption of your school's mascot. Does the mascot symbolize particular traits that are valued in your school?

OR

Design a coat of arms or crest to represent a group that is important to you — your family, your friends, or your sports team. Be ready to tell your class about the symbols used in your design.

Story poles are carved with figures representing characters from stories handed down from generation to generation. These stories might explain how natural objects came to be, like the story of how Raven brought daylight to the people. They might express beliefs about right and wrong, like the story of the boy who brought hunger to his people because he did not show proper respect for the salmon.

Some totem poles are also carved as memorials upon the death of important clan members. These poles are carved with clan crests as well as symbols related to events in the deceased person's life. When a clan leader dies, it is the responsibility of the person who inherits his rank and privileges to see that a pole is carved and raised with an appropriate ceremony. Traditionally, the Tlingit cremated their dead and placed the remains in a hollowed-out portion of the pole. Haida mortuary poles held the remains of the deceased in boxes placed in cavities at the tops of the poles.

Figure 47

This pole, carved by David Boxley, was raised in the Tsimshian community of Metlakatla to honor the carver's grandfather and to represent unity among the four Tsimshian clans. Photo by Donelle Blubaugh.

Poles may also be carved to honor the achievements of a living person. A pole recently raised in the Tsimshian community of Metlakatla is both a memorial to the carver's grandfather and a symbol of cultural unity among the four Tsimshian clans (see Figure 47).

Today, as in earlier times, most poles are carved by a master carv-

Figure 48

Enormous cedar logs such as these are carved to make totem poles. Photo by Donelle Blubaugh.

Figure 49

Nathan Jackson demonstrates totem carving techniques during the 1991 Festival of American Folklife. Photo courtesy Smithsonian Institution.

er commissioned on the basis of his carving skill and knowledge of traditional forms. Carvers must also have a detailed understanding of family histories and legends. As Dempsey Bob, a Canadian carver, explained in a 1989 interview, "To become a carver you have to know about your history, your oral history; you have to know nature, you have to know animals, you have to know wood, you have to know tools. . . . It's endless, the things you have to learn and it's a whole life learning process . . ." (Tongass Historical Museum 1993).

The process of creating a totem pole begins with the selection of a

cedar tree of appropriate height and diameter. Finding just the right tree might take days of hiking through spruce and cedar forests. Once a tree of the right size and shape is found, it is examined closely to make sure it doesn't have too many knots. If the crown of the tree is dead, the tree is probably dead on the inside and can't be used. The carver determines the quality of the wood by boring a hole in the tree that allows him to view the "heart" of the tree.

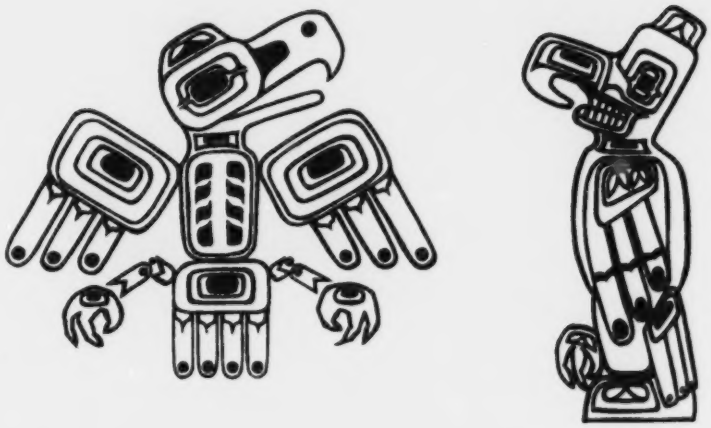
Once the selected tree is cut down, it is transported to the carver's work area. In the past, this involved enlisting teams of men to pull the log along skids from the forest to the water, where canoes were waiting to tow it to the village. Depending on the size of the log, it could take as many as 200 men twenty-four hours to get the job done. Of course, once the log was towed to the village, the skidding process was repeated to get it to the carving site. Today, carvers purchase logs (see Figure 48) from commercial logging companies, and massive machinery has replaced manual labor. Price depends on the height, diameter, and quality of the tree. The estimated cost of a log 30 feet tall and 28 inches in diameter is $1,200.

At the carving site, the log is placed on a block of wood and the bark is removed. Then the sapwood, the layer of new wood just beneath the bark, is removed with an adze. By this time the carver and the person who commissioned the pole have discussed the crests or legends that will be depicted on the pole. The carver will execute the design as he sees fit, but within the guidelines of traditional content and form. Depending on the size of the pole and the type of design, the carving may take several months.

Designs are drawn freehand with charcoal directly on the pole. Some carvers also draw designs on tracing paper which are later transferred to the wood. Rough figures are cut with a chain saw or an adze. With knives and chisels the carver refines the larger shapes and adds delicate detail (see Figure 49). Throughout the process, the carv-

Figure 50

Totemic designs represent animals, supernatural beings, and natural objects.



er keeps the wood damp by pouring water over it and placing wet cloths over freshly carved areas. Projections such as wings, fins, beaks, or tails are attached using a mortise and tenon joint.

Typically, the entire surface of the pole is carved. The figures appear to support each other as the viewer's eye moves up or down the pole. Many of the figures are distorted to make the design fit the available space and to make all the details of each figure visible on one side of the pole. The head, with exaggerated eyes, brows, and mouth, is usually the dominant feature, while the torso may be shortened or omitted.

Although Tlingit, Haida, and Tsimshian carvings differ in subtle ways, they share common designs and motifs. While the specific stories behind the carved forms of a totem pole may be known only to members of a particular clan, the features of the carved animals, supernatural beings, and natural objects have become standardized over time, making these forms easily recognized symbols of cultural identity even when they are extremely distorted. For example, the raven, hawk, and eagle are recognized by the design of their beaks. The raven's beak is straight, the eagle's is curved, and the hawk's beak curves down and inward until it reaches the mouth or chin. Other devices provide a kind of visual dictionary. The ears of an animal figure are placed on top of the head, for example, while those of a

human figure are placed on each side. A beaver is always represented by long incisor teeth and a cross-hatched tail. A few totem design figures are shown in Figure 50.

Can you identify the animals represented in Figure 50? Remember, look for a detail that is a distinguishing characteristic of a particular animal. How do these designs compare to those used by Hopi potters and Andean weavers?

In addition to these symbols, Southeast Alaskan artists use a special set of shapes to form decorative patterns in carving, painting, appliqué, and weaving. A curved rectangle called an ovoid (see Figure 51) is the most recognizable pattern. This shape is used for eyes, mouths, ears, and joints.

Figure 51

The ovoid is a shape commonly used to make decorative patterns.

Once the carver has completed his designs, he will decide whether to use paint to emphasize some of the features of the totem pole. The colors most often used are black, red, and blue-green. Traditionally these colors were made from natural ingredients. Black was made from charcoal or graphite. Red was made from ocher or iron oxide. Blue-green was made from copper oxide. These substances were

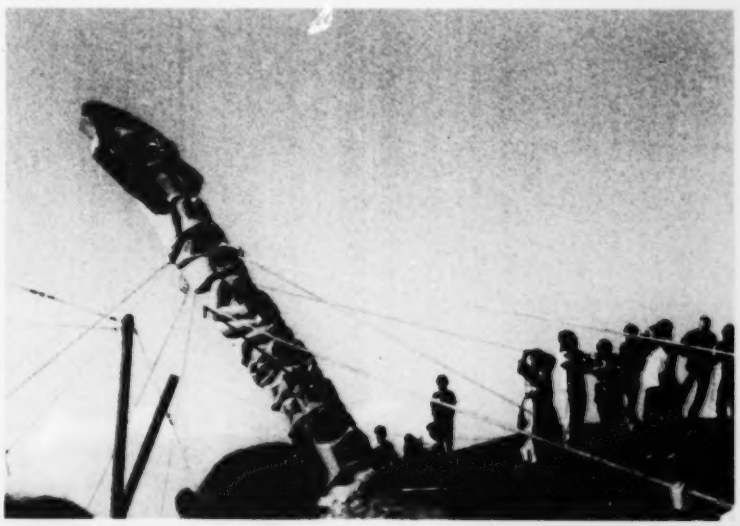


Figure 52

A pole-raising involves the entire community. Photo by Donelle Blubaugh.

Figure 53

Tsimshian carver David Boxley dances after the pole he carved as a memorial to his grandfather is raised in Metlakatla. Photo by Donelle Blubaugh.

mixed with a binder made from salmon eggs chewed, spit into a container, and then applied to accent carved features such as eyes, brows, and mouths. Today, commercial paints are used almost exclusively.

Other decorations may be applied as well, although they are seen more often on ceremonial hats and masks than on totem poles. Inlaid rounds of abalone shell may be used for eyes. Copper, feathers, and cedar bark are sometimes used.

No protective sealant is applied to the pole. Cedar wood contains oils that act as natural preservatives, but totem poles are not intended to last forever. Few existing poles are more than 100 years old. Traditionally, totem poles are allowed to deteriorate and fall, their remains rotting away quickly in the damp Southeast Alaskan climate. Because the totem pole carver works within a strict set of artistic and cultural guidelines, a new pole carved for a new occasion represents both the past and the present.

A finished pole is erected with great public ceremony. One of the

primary principles of Southeast Alaskan Native life is that all important events must be publicly witnessed. In this way, historical accounts are validated, social status is acknowledged, and debts are paid. A pole raising is a community event honoring the life of the person memorialized by the pole or acknowledging the rights and responsibilities of the clan it represents.

Before the celebration, or potlatch, begins, the completed pole must be brought to the site where it will be raised. Although labor-saving machinery could be used to transport the huge sculpture, new poles are ceremoniously carried to the site on the shoulders of the men of the community. Figure 52 illustrates the cooperative labor required to raise a pole to its full height. Onlookers watch silently as the designated director of the operation instructs the teams manning the ropes and guiding the pole to its vertical position. All eyes follow the pole's ascent. Breaths are held in anticipation until the ropes are released and the upright pole is fully visible against the sky.

Once the pole is in place, drummers and singers in full ceremonial regalia accompany the carver as he dances around his creation, his carving tools hung around his waist (see Figure 53). Skilled orators recite family legends represented by clan crests or recall the achievements of a memorialized leader. The clan who commissioned the pole will honor guests invited to witness the event by serving an elaborate feast and distributing gifts.

Traditionally, young carvers learned their craft through apprenticeships with recognized master carvers. Uncles were responsible for their nephews' upbringing, and young men were frequently apprenticed to their uncles to learn carving. Learning to carve involved making and caring for tools, copying the master's designs, and later creating original objects under the uncle's watchful eye. Apprentices learned the family legends and histories and the symbol systems that represented them.

The arrival of missionaries, government agencies, commercial fish-

eries, and logging interests in Southeast Alaska has disrupted nearly every aspect of Native life in the region, including the transmission of traditional arts such as carving. By the end of the 19th century, many Native villages were decimated by diseases imported by white settlers and explorers. Traditional Native life was interrupted as outsiders banned traditional ceremonies and seized land. The totem poles raised to honor Native life and history were sold or confiscated. Family units were splintered when children were forced to attend distant boarding schools away from the traditional influence of clan elders. Subsistence activity is now limited by federal law, forcing Native participation in the cash economy. Cedar forests, once the life-sustaining sanctuary of Southeast Alaska's First People, have become the property of the United States Government and commercial logging companies. In spite of these intrusions, Native artists, storytellers, fishermen, hunters, and other practitioners of traditional culture continue their work and share their knowledge in communities throughout Southeast Alaska.

Over the past twenty years, as Native Alaskans have fought for the right to use the land that was originally theirs, interest in traditional art forms has increased. Many adult Tlingit, Tsimshian, and Haida Natives who did not have the opportunity to learn from their families are turning to organizations such as the Totem Heritage Center in Ketchikan and the Sealaska Foundation in Sitka for training in basket-making, carving, drum making, and weaving. In courses taught by traditional artists and elders, many students are discovering unique talents as well as uncovering special connections to their ancestors and the environment.

Diane Douglas-Willard, a Haida basket maker, tells how she learned of an aunt's basket-making skill only after an instructor at the Totem Heritage Center remarked that someone in her family must have been a talented basket maker. This led Diane to research the origins of some baskets that her family owned. She discovered that the

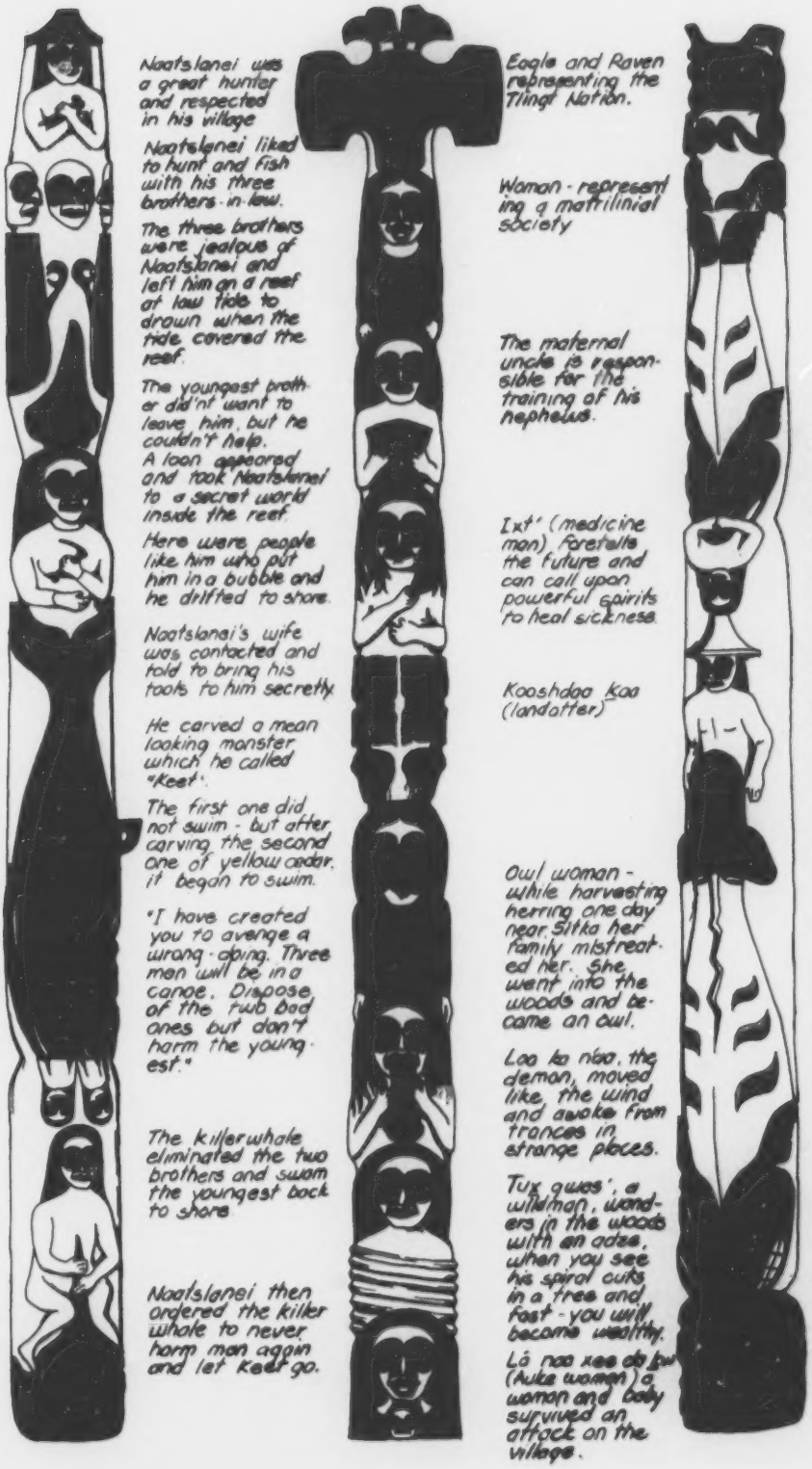
Figure 54

Diane Douglas-Willard discovered a talent for weaving baskets and a spiritual link to her aunt in basket-weaving classes at the Totem Heritage Center in Ketchikan. Photo courtesy Smithsonian Institution.

Figure 55

Lee Wallace, whose ancestors were Haida and Tlingit, traces his carving heritage back 200 years. Photo by Donelle Blubaugh.

intricate old baskets she had paid little attention to as a child were the work of her relative. Although Diane did not learn her art from her aunt, she thinks of herself as an heir to this traditional skill. Now Diane passes her knowledge on to her children, who participate in the gathering and preparation of the cedar bark from which Diane makes



Naatslanei was a great hunter and respected in his village

Naatslanei liked to hunt and fish with his three brothers-in-law.

The three brothers were jealous of Naatslanei and left him on a reef at low tide to drown when the tide covered the reef.

The youngest brother did'nt want to leave him, but he couldn't help. A loon appeared and took Naatslanei to a secret world inside the reef.

Here were people like him who put him in a bubble and he drifted to shore.

Naatslanei's wife was contacted and told to bring his tools to him secretly.

He carved a mean looking monster which he called "Keet".

The first one did not swim - but after carving the second one of yellow cedar, it began to swim.

"I have created you to avenge a wrong-doing. Three men will be in a canoe. Dispose of the two bad ones but don't harm the youngest."

The killer whale eliminated the two brothers and swam the youngest back to shore

Naatslanei then ordered the killer whale to never harm man again and let Keet go.

Eagle and Raven representing the Tlingit Nation.

Woman - representing a matrilinial society

The maternal uncle is responsible for the training of his nephews.

Ixt' (medicine man) foretells the future and can call upon powerful spirits to heal sickness.

Kooshdaa Kaa (landotter)

Owl woman - while harvesting herring one day near Sitka her family mistreated her. She went into the woods and became an owl.

Laa ka nàa, the demon, moved like the wind and awoke from trances in strange places.

Tux gwas', a wildman, wanders in the woods with an adze, when you see his spiral cuts in a tree and fast - you will become wealthy.

Lá naa xee da ku (Auke woman) a woman and baby survived an attack on the village.

Bear - strongman's clan

A huge sealion killed a hunter of the village.

The uncles, seeking revenge, met to organize a plan. All the nephews went into training to avenge the dead hunter. In the winter the young men would bathe in the salt water and be whipped with branches to keep the blood circulating. One nephew, who did not train with the others and was thought to be lazy, liked to sleep close to the fire. His skin became dark and he was named Duk t'ootl'. He trained secretly at night and when the day of the contest came he was ready. The young boys would attempt to kill the sealion barehanded. Duk t'ootl' had to beg to go because everyone made fun of him.

After all of the young men had failed to kill the large sealion. Duk t'ootl' grabbed the sealion and ripped it in half on the reef.

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Figure 56 (Left)

Illustration courtesy Goldbelt Corporation, Juneau, Alaska.

her baskets (see Figure 54).

Lee Wallace, a carver who lives and works in the Native village of Saxman near Ketchikan, traces his carving heritage back 200 years. Lee left a career in electronics to work with Nathan Jackson, a master carver who participated in the 1991 Festival of American Folklife. As Lee carves the last of six totem poles commissioned by a Ketchikan hotel (see Figure 55), he thinks constantly of his heritage, the remarkable cedar pole that will eventually tell part of his family history, and the future of the natural world celebrated in his art. Lee sees himself as both the bearer of cultural tradition and an artist "doing what my grandfather and great-grandfather did, which is carving cedar." He worries as continuous clear-cutting of ancient forests makes it difficult and expensive to get the strong, solid cedar required for totem poles. As a father who tries to interest his children in the traditional arts of his people, he hopes "more generations of this family will carry it on. My children are young and their futures are uncertain. Maybe they'll become artists. Maybe they'll use different mediums." He is considering carving a pole to express those feelings.

TIME OUT

Figure 56 demonstrates how totem poles relate to clan histories, legends, and beliefs. Notice that the poles are not "read" like a book; the carved symbols serve as visual reminders of detailed stories fully known only by clan members. Find a Southeast Alaskan Native legend you like from one of the anthologies listed on page 136 or from a source recommended by your teacher or librarian. Design a totem pole with figures representing characters or events for the story. Use your pole to help you remember the story as you tell it to your class.

OR

Design a totem pole that honors a special person or event in your life. Write a speech, poem, or song celebrating that person or event. Dedicate your totem pole by reciting your speech for your class.

Suggested Resources

General

All Roads Are Good: Native Voices on Life and Culture and *Creation's Journey: Native American Identity and Belief* (Washington, D.C.: Smithsonian Institution Press/National Museum of the American Indian, 1994) are two books which accompany exhibitions at the National Museum of the American Indian. Each book contains color reproductions of Native American arts and crafts and the commentary of Native Americans on the cultural significance of objects included in the exhibition.

Dover Publications, Inc., produces a number of inexpensive booklets containing designs from many Native American cultures that are useful for student art projects. Consult your bookseller.

Hopi Pottery

Designs and Factions: Politics, Religion, and Ceramics on the Hopi Third Mesa by Lydia Wycoff (Albuquerque: University of New Mexico Press, 1985). This study examines the historical, environmental, and cultural forces that contribute to the techniques and motifs used by Third Mesa potters.

Andean Weaving

The Weavers of Ancient Peru by M.S. Fini (London: Tumi, 1985). This introduction to Peruvian textile arts provides excellent photographs and illustrations of the weavers' work.

Southeast Alaskan Cedar Carving

Box of Treasures. Chuck Olin, director. U'Mista Cultural Center, producer, 1983. This 28-minute video tells of the return of Kwakiutl potlatch treasures seized by the Canadian government in 1921. Distributed by Documentary Educational Resources.

Cedar: Tree of Life to the Northwest Coast Indians by Hilary Stewart (Seattle: University of Washington Press, 1984). Stewart describes the amazing role of cedar in the lives of Northwest Coast Natives. Her photographs and detailed drawings illustrate the use of cedar as raw material for shelter, clothing, transportation, art, and ceremonial objects. Her focus on diverse uses of a single resource is excellent for helping students understand the concept of subsistence.

Keet Shagoon, the Origin of the Killer Whale. Naa Kahidi Theater, producer, 1988. This 28-minute video tells the story of Naatsilanei, who carves a killer whale to seek revenge against his brother-in-law. Four Tlingit performers costumed in traditional regalia enact the story. Available from Sealaska Heritage Foundation, One Sealaska Plaza, Suite 201, Juneau, Alaska 99801 (Tel. 907-463-4844).

THE POWER OF STORIES

Teacher Preparation

Accustomed as we are to the structures and functions of written language, it is easy to forget the power of oral traditions in the transmission of cultural knowledge. In all cultures, occupational and domestic skills, games, family lore, and moral and religious values are passed orally from generation to generation.

The unique identity of each culture is closely tied to its language. Where indigenous languages have been lost, knowledge of traditional life ways has been lost as well. Native Americans who attended U.S. Government residential schools beginning at the turn of the century were beaten for speaking their own languages. During the same time, Christian missionaries forbade the practice of the traditional ceremonies and rituals. Ceremonial events, and the elaborate preparations that preceded them, were among the most important ways of educating young people in the languages and ways of their people. In some Southeast Alaskan communities only the oldest residents speak their Native languages fluently. Today, preserving and teaching Native languages is a priority in Native communities. Esther Shea, a Tlingit elder and teacher who attended the 1991 Festival of American Folklife, uses traditional stories to interest children in learning about Tlingit language and culture. She explains, "You can't do your culture without the language."

Stories are only one example of the oral traditions that have guid-

Figure 57

Traditional stories come to life at the 1991 Festival of America Folklife. Ceremonial regalia, rattles, and drums add drama and meaning to Tlingit stories. Photo courtesy Smithsonian Institution.

ed and preserved all aspects of the lives of Native Americans. Ceremonial oratory, historical narratives, songs, and chants are also part of the oral literature repertoire. Stories, like craft objects, are resources for learning about the events and beliefs that shape and transmit the world views of the cultural groups that tell them. A decorated clay pot is an interpretation of cultural symbols that becomes a permanent example of the potter's view of the world at a particular time and place. Stories also function to distill and disseminate cultural information through the imagination and skill of the teller. Storytellers and oral historians are entrusted to maintain and transmit the spiritual and social knowledge that gives the members of a cultural group a sense of shared identity and purpose. At the Festival, Esther Shea described the context in which her culture's stories were told: "Long ago, very long ago before my mother was born, they told these stories and repeated them in their community houses, long houses. They sat around the fire and repeated them because there was no TV. They didn't have books, they didn't have a radio. And they were repeated and over and over so that they could remember. . . . Each story had a moral; there was a lesson to each story."

Unfortunately, the characteristics of oral literature that contribute

to its lively, unique function in indigenous societies are compromised by translation into non-Native languages and written form. The convenience and accessibility of print versions of traditional stories make them important sources of learning and entertainment. However, the essential ingredient that gives oral literature its power, the voice and presence of a storyteller respected for his or her authority and skill, is left out. When these written texts are presented as mutable versions of stories told aloud within the context of other social activities — during ceremonial occasions (see Figure 57) or while learning how to perform a task, for example — students can be guided to explore their content as well as practice listening and performance skills.

A topic for discussion with students is story ownership. Students will be familiar with the idea of ownership of printed material. Many Native Americans argue that oral traditions and stories are also "owned" by the groups from which they originate and that it is a violation to publish these stories without the group's consent. If possible, you may wish to invite a Native American speaker to discuss this issue with your students.

Focus Questions

What can stories tell us about the world views of various cultures?
How can stories be used to preserve and share cultural traditions?
What values and beliefs are communicated in Native American stories?

Suggested Activity

Collecting family stories is one way to involve students in thinking about the way stories work to preserve information about a particular group. Begin by sharing the following story about how a Haida boy was given his nickname. Among Southeast Alaskan Natives, naming is a significant event. One's name indicates social status, group accep-

tance, and personal relationships. This story illustrates how a teasing nickname became a respectful "true" name through the intervention of a respected elder who spoke Kaigani Haida, the dialect of the Haida people. *kwaay iiwaans* means "big flowing (stream)" and "big butt."

Paul's Name

When my son Paul was this small his hips were this *big but his legs were* **this** *big around. He was very short and fat. And then when Puuji and his friends came from the school house the children used to look at him. At that time "Big Butt" is the name we gave him. One time when Mrs. Davis was visiting mother we were making fun of him, calling him "Big Butt." "That name of his is high class, I give him the name," Mrs. Davis said. "It's a big name, 'kwaaay iiwaans.' 'kwahgaay iiwaans' is the way you pronounce it." And so, you see, it's not our clan name. Mrs. Davis gave it to Paul. "It's really a true name," she said, when she gave it to him. "This is his name, 'kwaaay iiwaans'" (Eastman and Edwards 1991).*

Ask students to think about the circumstances that might lead to a telling of this story. How do they think the story might change if Paul told it instead of his mother? Can any students tell stories about the origins of their own names?

Continue to demonstrate story sources and purposes by telling a story of your own that could be described as traditional within your family. The story might be about an event that is significant in your family. For example, many American families have stories about how their members survived the Great Depression. Your story might involve the exploits of a particularly colorful or heroic family member. It could be a traditional moral or cautionary tale that is not unique to your family but was told to you by a family member. Stories serve the

same functions in families that they serve in the larger culture; they entertain, transmit history and religious teachings, guide behavior, or explain natural and supernatural events. Your story doesn't need to be elaborate or dramatic, but it should be one that has a recognizable structure and an easily identified purpose.

After you have told the story, share information about the story that will prompt students to identify story sources in their own families. This information can be shared within the framework of the following questions:

When and where are family stories most likely to be told?
At family gatherings such as reunions?
During holidays?
On special occasions such as weddings or birthdays?
At bedtime or mealtime? During car trips?

Who most often tells stories in your family?
An older relative?
Someone who has a special knack for remembering or performing?
How did this person learn the stories?

If your family has more than one storyteller, do they tell the same stories?
How does one storyteller's version differ from another's?

Why are the stories told?
To share family history?
To make you laugh?
To teach children how to behave?
To explain something you can't see?
To make something less frightening?

Are these stories ever told outside your family?

At school or church?

Have you ever read them in books?

Once students understand where and how stories might be found, they can start collecting their own. The following guidelines will structure the assignment:

- Identify a family member or friend who will be willing to share a story with you. Explain that you are collecting stories that have been passed down in your family from generation to generation. The stories might be specifically about your family, but they don't have to be. If you have in mind a particular story that you've heard, ask your source to tell that one.
- Ask your source's permission to record the story as he or she tells it. Be sure your source knows the story will be shared with your classmates.
- Use a tape recorder that you know works well. Use a high-quality tape no longer than 60 minutes. Be sure you are prepared with spare batteries and tapes.
- Ask your source to sit in a quiet, comfortable place where the recording will not be interrupted. Place the microphone on a solid surface as close to the storyteller as possible.
- Test your equipment to make sure the storyteller's voice will be recorded clearly.
- When your source has finished telling the story, ask him or her some questions to learn about where the story came from. Here are some sample questions:
    - When and where did you first hear this story?
    - Who told it?
    - When do you usually tell this story?

- Is there anyone else who tells this story? Is that person's version different from yours?

Share the story you collected with your class. Be ready to talk about where the story came from and why it is important. Does the content of the story tell you anything about what your family believes and values? For example, if your source told a story about how someone was punished for telling a lie, you could say the story shows that your family values honesty.

Compare the story you collected with those of your classmates. What are the similarities among them? What are the differences?

Note:

Class projects that require students to use family members as sources can be problematic for some students. As you adapt this project for your own classes, be prepared to offer alternatives for students who need to find other sources of stories.

Suggested Activity

Once students are familiar with the functions of stories in families and communities, they are ready to examine what the Native American stories presented here tell us about the values and traditions of the cultures they represent. The stories presented here are just a few examples of traditional Native American stories that illustrate religious beliefs, relationships to the environment, and explanations of natural phenomena. They can be used as part of an extensive unit on mythology or in conjunction with exploration of Native American belief systems. Older students might be interested in comparing the content of traditional stories with that of contemporary Native American fiction and poetry.

As students listen to and read these stories, they should note how

their content is related to subsistence practices and the environment. Quotations from the stories and student observations can be added to the concept map described on page 10.

Suggested Activity

One way to give written versions of traditional stories the flavor of oral transmission is to use the printed story as a kind of script for oral performance. Traditional stories revised for publication leave out the devices — repetition, rhythm, physical movement, props — used by storytellers to aid memory and capture the audience's attention. When the stories reprinted here are first presented to your students, they should be *told*, rather than read aloud or silently. Listed below are some suggestions for effective storytelling.

- Read the printed version of the story you wish to tell several times to become familiar with its structure and content.
- Rehearse a retelling of the story from memory. You may want to tape record your retelling and review the recording for timing and inflection. Remember, your goal is not to recite the written text, but to *perform* a retelling. Where can you add your own touches — pacing, volume, gestures, pauses, repeated phrases, etc. — to add drama to your telling? Many Native American stories begin and end with formulaic phrases to signal the audience. For example, Hopi storytellers call out "*Aliksai!*" (ah-LIHK-syh), which means "listen," to begin a story. Listeners respond by saying "oh" or "ho."
- Look for opportunities to involve students in the story. Students can make sound effects or predict story outcomes prompted by questions such as "What do you suppose happened then?"
- Create a classroom environment conducive to listening and participation. Draw students into a close circle, dim the lights, or play appropriate recorded music or environmental sounds to set the mood.

Discuss the context in which the story would be traditionally told. For example, in Southeast Alaska a young man's first successful hunt is an occasion for telling stories. Aymara parents tell stories about supernatural beings to ease their children's nighttime fears. Hopi elders tell Kachina stories to teach young people about the role of these spirits in their lives. Students can be involved in researching the social situations that call for storytelling in different Native American cultures.

STORY ONE · THE HOPI STORY OF EMERGENCE

All groups of people have beliefs that describe how their world was formed, how it is structured now, and what underlying forces control it. Often these beliefs are expressed in the form of stories. Such stories express beliefs about

- how the world came to exist
- why animals, people, or plants look the way they do
- what causes events such as earthquakes and floods
- how the sun, moon, and stars were created
- why people behave in certain ways
- how deities and people interact

Each culture has a unique set of beliefs and unique stories that explain how the people in a culture view the world. Each world view developed in a particular cultural, geographical, and historical setting over many generations. Stories are one way information about historical events, religious beliefs, and other knowledge is preserved and shared. It is important to remember that the term "story" does not necessarily indicate that something isn't true.

TIME OUT

What are some other ways history, beliefs, and values are demonstrated and shared by the members of a culture?

According to Hopi tradition, when the Third World became plagued with evil and corruption, the people were told that they could leave that world behind and enter the Fourth World if the spirit Masauwu gave his permission. The story of the emergence of the Hopi people into the Fourth World is the foundation of Hopi spiritual belief. There are many versions of the story, but all of them involve the cooperation of people, animals, and spirits to reach a new world where the Hopi agree to live according to the instructions of Masauwu, guardian of the Fourth World. The version printed here is excerpted from Albert Yava's 1969 telling of the story transcribed by Harold Courlander and published in *Hopi Voices* (1982). Non-italicized sections are summaries of story sections removed from the original transcription.

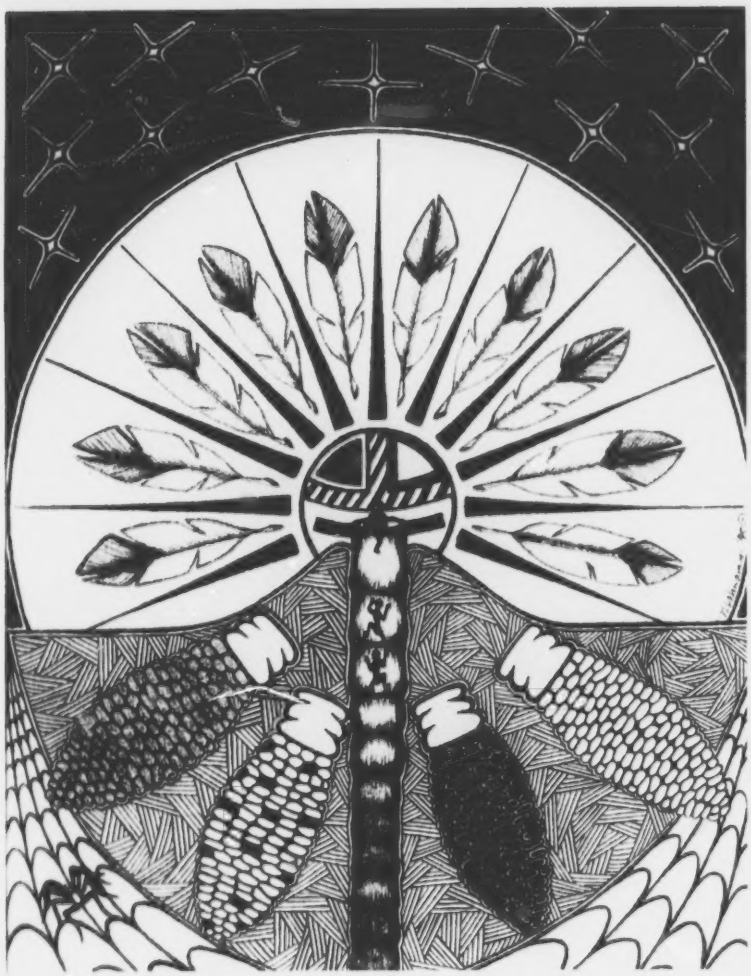
Read or listen to this story to learn about cooperation between humans and animals in the Hopi world. Also, look for information about how Hopi agricultural practices relate to spiritual beliefs.

The Emergence

The people who wanted to escape from the Third World decided to send a scout up to see what it was like up there and make contact with Masauwu.[1] *They chose a swift bird, the swallow. But he tired before he reached the sky and had to come back. After that they sent a dove, then a hawk. The hawk found a small opening and went through, but he came back without seeing Masauwu. Finally they sent a catbird. He was the one that found Masauwu. Masauwu asked him, "Why are you here?" The catbird said, "The world below is infested with evil. The people want to come up here to live. They want to build their houses here, and plant their corn." Masauwu said, "Well, you see how it is in this world. There isn't any light, just grayness. I have to use fire to warm my crops and make them grow. However, I have relatives down in the Third World. I gave them the secret of fire. Let them lead the*

Note 1
Masauwu is identified as the fire deity of the Third World who was made the deity of death and the underworld when his self-importance angered Taiowa the Creator. When the Third World was destroyed, Masauwu was given a second chance and was appointed to guard and protect the Fourth World.

Illustration by Monica Nuvamsa.



people up here, and I will give them land and a place to settle. Let them come."

After the catbird returned to the Third World and reported that Masauwu would receive them, the people asked, "Now, how will we ever get up there?" So Spider Old Woman called on the chipmunk to plant a sunflower seed. It began to grow. It went up and almost reached the sky, but the weight of the blossom made the stem bend over. Spider Old Woman then asked the chipmunk to plant a spruce tree, but when the spruce finished growing it wasn't tall enough. The chipmunk planted a pine, but the pine also was too short. The fourth thing the chipmunk planted was a bamboo. It grew up and up. It pierced the sky.

Spider Old Woman said, "My children, now we have a road to the upper world. When we reach there your lives will be different. Up there you will be able to distinguish evil from good. Sorcerers cannot come with us, or they will contaminate the Fourth World. So be careful. If you see an evil person going up, turn him back."

The people started to climb up inside the bamboo stalk. The mockingbird took the lead. He went ahead of the people, and every time he came to a joint in the bamboo he said, "Pashumayani! Pashumayani! Pashumayani! Pash! Pash! Pash! — Be careful! Be careful!" . . .

The mockingbird said, "Be sure to leave the evil ones down there." "Who are the evil ones?" "Oh, you all know who they are. We had plenty of evil down there. We don't want it up here in this world."

(The people continued to travel up through the bamboo, constantly directed by the mockingbird. When the last person emerged, the mockingbird instructed them to close up the end of the bamboo with some cotton. Then the people wondered if they had succeeded in leaving the evil one behind.)

They looked at one another. Then this fellow that represents evil laughed. "Haah! You can't get along without the evil one. He has a part to play in this world. You have to have the good and the evil, so I came up." "So you are here?" "Yes." "We didn't want you up here." "Why?" "Because you're always doing something evil that we don't like." "Yes, I know that. But somebody's got to warn you early in the morning when daybreak is coming."

"How will you let us know?" "Soon as you see the white streak in the place where the light is going to be from, I'll give you a cry that [day is here]." "What kind of day?" The evil one said, "We're in a kind of [half] light now, but there'll be daylight to come. There are a lot of wise men here. Let's first fix up the old sky. Anybody got a

buckskin with no holes in it?" Somebody said, "Here's one." "Where'd you get a buckskin with no holes?" "I didn't have to shoot this deer. I just outran him."

(Then the evil one hung two buckskins in the sky, each covered with yellow pollen, to provide two sources of light in the new world: Tawa, the sun, and Muyao, the moon. He also scattered graphite in the sky to create the sparkling stars. The people were afraid, since these things were provided by the evil one. After much discussion, the people agreed that the evil one had good qualities, too, and they set about determining how they would live in the new world.)

The mockingbird had a big job. As the people came up in groups he told them where to station themselves around the sipapuni[2] and he told them what language they were going to speak from that time on. He told the men to sit in a big circle, and in the middle he put out a lot of different kinds of corn. White corn, yellow corn, speckled corn, red speckled, blue speckled, gray speckled, every kind of corn. And in amongst all the corn there was a short stubby blue ear. The mockingbird said, "Now, all these different kinds of corn mean something. This yellow corn means enjoying everything in life. If you have that corn you'll be prosperous. But you'll have a short life. This short blue ear means a lasting life, a long life. People won't die young, they'll grow old. But they'll have to work hard. It will be a rugged life for them." The mockingbird explained about every different kind of corn and what it meant, and he told the tribes to choose the one they wanted. The men in the council were thinking about which one they were going to choose. There was one tall, slender man sitting here, and he didn't think very long. He was the Navajo. He reached out and took the yellow ear, the one that meant a short life but an enjoyable one. He said, "I don't know why it takes you people so long to decide. I'll take this yellow one. Even if my life won't be long it'll be enjoyable. I'll enjoy women, I'll enjoy riches, I'll enjoy everything." . . .

Note 2
The place of emergence. This term is sometimes translated as "navel." A *sipapuni* is also a small hole in the floor of a *kiva*, or underground ceremonial chamber, that represents the place of emergence.

Well, then all the other people around the circle began grabbing the corn ears. The Comanches got the red corn. The Sioux got the white corn. The Utes got the flint corn with the hard kernels. . . . Every tribe got one particular kind of corn. But the leader of the bunch that were going to be Hopis, he was slow. He kept on sitting there, thinking about which corn would be the best for him. The corn disappeared pretty fast, until there was only one ear left, the short stubby blue one. So finally he took that one. He said, "That's the way it's going to be. I'm going to have to work hard, but I'll have a long life."

The people were getting ready to disperse, to go on their migrations, but they discovered that a child had died, the son of one of the chiefs. The people were all mourning, wondering why the child had died. The evil one said, "Say, don't cry about this. Come over here and look down [through the sipapuni]." They did that, they looked down into the Third World, and they saw the boy walking and running around down there. The evil one said, "You see, he's alive." The people said, "If he's alive, then why did we have to send him back there?" The evil one said, "It wouldn't be good to have [the spirits of] the dead among you living people. When your stalks [i.e., bodies] are old and not useful anymore, you'll go on living down there. Your stalk will remain here, and your iksi [breath] will go below and go on living."

After that, the people started on their migrations, saying that some day they would all come together again.

TIME OUT

Discuss the following ideas from the Hopi emergence story with your classmates.

What role do animals play in this story?

How do you think these roles influence the way animals are viewed in daily life?

Who are the deities in this story? What is their relationship with the people who inhabit the world?

What information are the people given about how they should live their

lives in the Fourth World? Think about what you know about the Hopi way of life. What aspects of the emergence story explain these ways?

STORY TWO · RAINFOREST SPIRITS

The following story comes from the Shuar people of Ecuador, another Native American group that participated in the 1991 Festival of American Folklife. As you read or listen to this story, write down words or phrases from the story that provide information about where and how the Shuar people live. The following list will help you keep track of clues. Some examples are provided.

People: *a Shuar woman*
Things that people do: *gather plants*
Types of food: *bananas*
Types of animals: *snakes*
Deities: *Nunkui*
Things that deities do:
Environmental features:

Nunkui

The Shuar were living on what they could gather because they did not know anything about vegetables or horticulture. They almost died of hunger because in the jungle they found few things to be used for food. They ate the fragrant and tender leaves of the unduch', *the* eep, *and the* tunchinchi *plants, which we still eat today.*

A Shuar woman went out to gather some edible plants. She walked far along the stream, but did not see anything. She was tired from so much walking without finding anything, but then she saw some peels of vegetables and fruits that she had never seen before floating down the stream. She tasted them and liked them. She continued walking upstream to see where they were coming from and she

saw a woman washing the fruits and vegetables. The Shuar woman approached her and asked for something to eat since she was very weak. The woman looked at her with sympathy and said, "I have waited for you to give you my daughter. You can ask her for all of the things that you see in my basket: fruits, vegetables, animals, drinks, and anything else." When she handed little Nunkui to the Shuar woman she added, "Do not mistreat her. Make sure that everyone treats her with respect to avoid great misfortune!"

The woman treated Nunkui well and carried her in her skirt. When Nunkui gave the woman a large vegetable garden filled with different vegetables, the woman left Nunkui in the house to play with her other children while she cultivated her plants.

The children played and they began to ask Nunkui for things. All of their wishes were granted. They asked for snakes, tigers, spirits, and even dry leaves. She brought them everything they wanted. But when they asked for animal heads so that they could eat the brains,

Nunkui would not comply. She brought them a cooked monkey, but without the head. The children began to get stubborn with their demand for the animal heads, so Nunkui brought them the head of the spirit deer, something that a Shuar would never *eat. The children resented Nunkui beyond belief, and they began to mistreat her by throwing ashes in her eyes. She escaped, climbed up the ritual pillar of the house, sat on the roof, and began to sing:*

Bamboo, come take me away,
and we will eat white peanuts.

The various types of peanuts and large tubes of bamboo began to grow out of nothing. Meanwhile, the vegetables in the garden began to degenerate and disappear. They all began to turn into wild plants which were not edible.

A strong wind bent the bamboo toward Nunkui. She grabbed it, jumped inside the large bamboo tube, and descended to the ground. The woman returned from the garden, exasperated by what was happening, and cut the bamboo to try to trap the little Nunkui. As soon as she cut it, it formed a knot so that she could not fit her hand into it to grab Nunkui. As she tried to cut below the knot, the same thing happened; another knot was formed. That is why the bamboo has so many knots today. When she cut the bamboo even with the ground, she found some stones inlaid into the bamboo called Nantar *with red, blood-like veins. The woman began to sing the prayers that Nunkui had taught her, and the* Nantar *began to come to life and speak. Then some potato plants began to grow which produced potatoes called* chikia, tuka, *and* pinia.

The Shuar woman returned to the stream and found Nunkui once again and begged with her. But Nunkui was resentful and said, "From now on you will work hard planting things and be fatigued, but you will harvest little." Then, in a wave of compassion, she gave the

woman some yucca, sweet potato, and banana seeds to plant in her garden. So the woman planted these seeds and hid the Nantar *stones in her garden. And she sang the prayers of Nunkui every day to give her plants strength, so that the people would never lack sustenance (Pellizzaro 1990).*

Using the clues you collected, draw a picture of how you imagine the Shuar world to be. Compare your drawing to those of your classmates. Your teacher will tell you more about the Shuar and their environment. How accurate was your drawing?

How is this environment different from the others you have learned about?

What lessons would a Shuar child be expected to learn from this story?

Note for Teacher:

The Shuar live in the humid tropical rainforests of southeastern Ecuador. The landscape is rough, with many rivers and canyons. Subsistence activity centers on hunting, fishing, and gathering of wild fruits. Manioc, sweet potatoes, peanuts, and white maize are among the crops the Shuar plant in fields constantly crowded by rapidly growing weeds. The Shuar refer to their rainforest home as "the lungs of the world."

STORY THREE • RAVEN FINDS WATER

Southeast Alaskan Native stories frequently tell of the adventures of Raven. Raven often plays a dual role — he can be a provider, giving humans the things they need to live in the world, and he can be a trickster, putting humans (or other supernatural beings) in embarrassing situations. In the following story, Raven is responsible for finding the water that has been hidden from the Haida people.

The version of the story presented here is translated in a way that tries to give you some idea of the Haida way of speaking. You will notice some characteristics of this translation that may seem unusual to you. In Haida speech, verbs tend to come at the end of a sentence,

Figure 58

It is impossible to translate an oral narrative so that it has exactly the same sound and meaning in written English. Here, a few lines of "Raven Finds Water" are written in the Haida language in italics. Each Haida line is followed by its word-for-word translation into English. Then, it is shown as it was rewritten for publication in English. From Carol M. Eastman and Elizabeth A. Edwards, Gyaehlingaay: Traditions, Tales, and Images of the Kaigani Haida *(1991).*

Raven Finds Water

yaalaay	*Gantl ' qíiaan*	*hinuu*	*ki'áan*	
raven	water finds	this is what	called	

***Raven Finds Water,* this is what it's called.**

awaahl Gagwíiuu	*Gantl*	*Xíigalaang*	*tl'*	*súugan*
a long time ago	water	dried up	they	say

A long time ago the water dried up, they say.

gam	*tlútsantl'aa*	*Gántl*	*isáangaan*	*tl'*	*súugan*
not	anywhere	water	wasn't	they	say

There wasn't any anywhere, they say.

waadluu	*tlíijiidaan*	*hlingáan*	*kwaayáans*	*hánuu*
and then	anywhere	small	flowing	any

Xíigalaan	*tl'*	*súugan*
dried up	they	say

And then all the small streams dried up too, they say.

with the main point of the sentence at the beginning. Therefore, this story begins "*Raven Finds Water*, this is what it's called" instead of "This story is called *Raven Finds Water*." In Haida stories, phrases are often repeated to build excitement and to help the teller remember the thread of the story. Sometimes these phrases are sung or chanted. Phrases such as "and then" and "after that" are used more often than most English-speakers are used to.

It is impossible to translate an oral narrative so that it has exactly the same sound and meaning in written English. In Figure 58 a few lines of "Raven Finds Water" in the Haida language are printed in italics. Each Haida line is followed by its word-for-word translation into English. Then it is shown as it was rewritten for publication in English.

As you listen to or read this story, think about the relationship between people and the spirits who control the forces of nature.

Raven Finds Water

This story is called "Raven Finds Water."

A long time ago, they say, the water dried up. There wasn't any anywhere. And then all the small streams dried up too.

There was nothing anyone could do about it. They didn't know what to do. There was nothing that could be done for the people.

But Raven himself, feeling confident, got himself ready to do something about it. He would look for the water.

And then Raven knows it is the Island Spirit at Hazy Island that owns the water. But no one else knows where the water is. Only the Island Spirit knows.

And then Raven took a canoe to go to the island. He started out toward the island on a canoe.

He got himself ready to steal the water from the Island Spirit as he rowed himself toward the island. When he got halfway there the fog blew in and covered him. And then when the fog densed up too much, he was lost. And then he was just floating around there.

Raven was wondering what he could do about it.

When the Island Spirit found him there this is what he said to him: "You shouldn't be here. There's nothing here for you. Nothing. The weather will handicap you. There isn't water on the island."

This is what he told Raven.

He also said to him, "Don't be crazy! Turn back, back, turn back!"

This is what he would tell him.

And then Island Spirit left him.

Raven pretended he was going back. But it wasn't long afterward that he turned back again toward Island Spirit's home. He used the sun to get his bearing. He rowed according to it. While he was rowing he heard the surf. Soon he heard the surf breaking on the island.

He arrived at an inlet on the beach and the Island Spirit welcomed

him. He came to meet him on the beach. Because he was so glad to see him he invited him to his home.

And then Raven acted as if he was thirsty. He exaggerated how thirsty he was.

The Island Spirit had hidden the water. He really made sure his water was hidden.

Raven was curious about it. And then, because he had a strong mind, he was able to stay there with him for a long time in spite of his thirst. He was looking for Island Spirit's water. He was wishing he could find where the water was hidden, looking at Island Spirit suspiciously.

(Speaker sings in a high monotone:) waited for him—waited for—

He waited for him.

In the meantime he thought about how he could get the best of Island Spirit. He wanted the water so badly. He wondered about it for a long time when suddenly, by chance, the Island Spirit got tired. So while warming his back at the fire he went to sleep!

And then while he was sleeping, Raven went towards a rookery-cliff, scooped up quite a bit of bird droppings, and went back to Island Spirit while he was sleeping and rubbed it (the droppings) all over his (Island Spirit's) clothes. And it was after that Island Spirit woke up.

And then Raven said to him, "You stink really bad. You stink really bad."

And then the Island Spirit thought he had made himself stink. It was because he had been looking for eggs. While he was looking for eggs, he had made himself stinky, he thought.

And so Raven said to him, "Do bathe yourself, do bathe yourself."

And then Island Spirit made himself ready. He got himself ready to bathe. He got his basket ready for the water and he left. He went to get water. While he was confused he forgot that he had lied to the

Raven. He had said that there was no water to be found.

And after that he walked quite a ways from the house. There was floating moss hanging from the rock and ground swells breaking there below. Under the hanging moss was the water hole.

And thus Raven discovered where the water was and he prepared to steal the water. He would steal from the Island Spirit.

And then when early morning came he sneaked out from his house. He took his water basket and walked to where the water hole was. And because he was thirsty he drank water for a long time. He was very thirsty. He took a long drink.

Afterwards he filled up his water basket. He filled his beak too. And then after he got all the water he could he flew toward where the big island was situated. Still water was not to be seen there.

And then Raven, while flying around high over the land, he sprayed the water from his nose. Where water once flowed he blew water and he blew it onto the land. While he was doing this he was blowing water even into the middle of the clouds.

While this was happening it started raining and it didn't stop. And then where the water used to flow it got full. Flood flowed.

(Speaker chants:) the creeks crested—

After that, water was plentiful and the people were happy. And it was Raven, they said, Raven saved the country.

This is the end of my story.

From Carol M. Eastman and Elizabeth A. Edwards, *Gyaehlingaay* (1991).

Native American stories are often told in the form of dramas that combine songs, dance, and costumes. Prepare a dramatized version of "Raven Finds Water." Make masks to represent each character. Two people in costume could act out the story while a third provides the narration. Even though this story is humorous, it is very important to treat the story and its characters respectfully. To parody or make fun of the story would be a show of disrespect to the Haida people.

OR

Each person has his or her own view of how the world was created and the forces that influence the way the world works today. These views may be based on religious beliefs shared with other members of the culture; they may be based on scientific information, or they may be influenced by the imagination.
Write your own story of how the world was formed and why the people in it live the way they do. Your story should include some of the following features:

- **Tell about how your world came to be the way it is.**
- **Tell about the powers that control how your environment works.**
- **Tell about how these powers influence the behavior of people.**
- **Tell about how the way people live is influenced by the environment.**
- **Tell about relationships between people and other living things.**

Creating a whole world is hard work, but use your imagination and have fun. Your story may be based on your own religious beliefs, on scientific knowledge, or on your own fantasies.

Illustrate your story with pictures or diagrams, then share it with your classmates.

OR

Explore the stories of a Native American group that is not profiled in this book. Start by researching the environment in which your group lives. Learn about how topography, climate, animals, and vegetation influence daily life. You may want to learn about a Native group that lives in your region.

There are many collections that feature the stories of Native Americans. Your teacher or librarian can help you locate some. A few titles are listed below. Look for stories that describe the world view of your chosen group. Write a report about how these stories reflect the environment and illustrate the beliefs of the people. Then, tell or act out one of the stories you found to your class. Your teacher will give you suggestions for how to tell stories effectively.

Native American Story Collections

American Indian Myths and Legends, selected and edited by Richard Erdoes and Alfonso Ortiz (New York: Pantheon, 1984).

Keepers of the Earth: Native American Stories and Environmental Activities for Children by Michael J. Caduto and Joseph Bruchac (Golden, Colorado: Fulcrum Publishing, 1988).

Spirits, Heroes & Hunters From North American Indian Mythology by Marion Wood, with illustrations by John Sibbick and Bill Donohoe (New York: Peter Bedrick Books, 1992).

Hopi Tales, a collection of traditional Hopi tales told by Jack Moyles, is available from Smithsonian Folkways Recordings.
Smithsonian Folkways cassette #7778
Smithsonian Folkways Mail Order
414 Hungerford Dr., Suite 444
Rockville, MD 20850

RITUAL AND CEREMONY

Teacher Preparation

Ritual and ceremonial behavior is a formalized display of the spiritual and social forces that operate in the lives of people. To greater or lesser degrees, each of us acknowledges these forces in the course of daily routine. A Tlingit woman briefly thanks the spirits when she enters the rainforest to gather cedar bark for her weaving. A student says a silent prayer before a big exam. A dinner guest presents a bouquet of flowers to reciprocate his host's generosity. Such rituals, often performed as unconscious habits, hint at the fundamental religious and social structures that influence our lives as individuals and as members of a particular community or culture. The more elaborate rituals and ceremonies we hold for special occasions such as weddings, holidays, religious observances, and funerals bring the defining values and beliefs that lie just below the surface of daily life into the foreground. On these occasions, the flow of time is altered. When a Hopi elder retells the story of emergence into the Fourth World during the first winter ceremony or when the story of the deliverance of the Jews from Egypt is told during Passover, the sacred past is given meaning for the present. Our homes or communities or churches become like stages where the past is reenacted, change is acknowledged, and a common future is launched. The drama and formality lent by music, dancing, feasting on special foods, and wearing special clothing intensify the importance of the event. Every person involved is both actor and

audience in a performance that defines the community and the roles of individuals within it.

To look at the rituals and ceremonies of any cultural group is to see its world view intensified. These ceremonies are elaborate exhibitions of the values and beliefs that bring meaning to life. In the ceremonial traditions of the Native American groups presented here, which call out to the spirits and deities that control nature's forces and provide humans with life, you will see how reverence for the natural world demonstrated in everyday subsistence practices is magnified. When the vital balance between humans and nature or between one human and another has been disturbed, the ceremonies of the Southeast Alaskan potlatch restore equilibrium. Among the Aymara and the Hopi, the concept of reciprocity is demonstrated again and again in rituals that symbolically give back to the earth what the earth has given. In each group the importance of community well-being is emphasized in each person's willingness to contribute to the success of an important ceremony.

Community rituals and ceremonies are important markers of individual change. For example, the Hopi ritual for girls who have reached puberty is not only celebration of a new stage in a young woman's life; it is also a way of letting the community know that she can now be expected to accept the increased responsibilities of an adult. Preparation for the ceremony — preparing cornmeal, receiving religious instruction, and learning other Hopi ways — is also preparation for her future life.

Social change is also acknowledged through ritual. Native American cultures are not immune to change. Historical events such as the European conquest, advancements in technology, even the rediscovery of an ancient farming technique such as raised fields bring changes that are reflected in the ceremonial lives of Native Americans. New episodes are added to the clan histories of Southeast Alaska.

Perhaps one day characters representing Alan Kolata and Oswaldo Rivera, the archeologists who reintroduced *suka kollu* technology to the Aymara, will appear in the masked dances performed during fiestas.

It is during ceremonies and rituals that all of the markers of cultural identity are in place. Ceremonial regalia bearing clan symbols are worn, stories that teach children about the natural and spirit worlds are told, and the food harvested from land and water is shared. The weavers', potters', and carvers' arts are represented in ceremonial objects newly made or handed down through generations. Musicians and dancers express ancient beliefs and establish new patterns of celebration.

One characteristic of a subsistence culture is that the people produce all they need to live on from the environment or from trade with other groups. Although each of the Native American groups described here participates in the cash economy to some degree, it is a source of pride that their specialized knowledge of the land affords the power of independence and self-sufficiency. This power is renewed and celebrated in annual ceremonies that enact human and agricultural life cycles. It is reinforced and continued as young people prepare for initiation into adult society. As students look at the ritual and ceremonial lives of Hopi, Aymara, and Southeast Alaskan Natives, they will see how the objects of everyday life — an ear of corn, a cedar hat, a bit of llama fat — become sacred metaphors for the beliefs and values that bind communities in ancient and ongoing reverence for the land.

Suggested Activity

Before students read about and discuss the rituals and ceremonies described below, ask each student to write about a ceremony or ritual he or she has observed or participated in that is important. Be sure students understand that they can describe secular or religious practices. First Communion, initiation into an organization such as Boy or

Girl Scouts, graduation, weddings, and holiday celebrations are some examples. In their writing, students should describe the event and discuss its significance. The following list of questions will help them focus their thinking.

- Who is involved in this event? Do certain people have special roles?
- What takes place at this event? What is done to prepare for it?
- Where does it take place? Are there special reasons for this location?
- When does it take place? Is the event tied to a particular season or a particular time in a person's life?
- Why is this event important? Does the event communicate ideas that are important to the people involved?
- How did witnessing or participating in this event make you feel?
- What did you learn?

After students share their writing with each other, use the concept map suggested on p. 10 to review what they have learned about Native American subsistence practices and beliefs and values regarding the environment. Ask students to think about how the rituals and ceremonies described here are linked to Native American concepts of the land discussed in previous sections. How are ritual and daily life linked?

Focus Questions

- What are rituals? What are the functions of ritual and ceremonial activities in cultures?
- What are the sources and meanings of some of the rituals and ceremonies practiced in Native American cultures?
- What cultural values and beliefs are communicated in these rituals and ceremonies?
- How are these rituals and ceremonies related to subsistence practices?

POTLATCH: HEALING AND CELEBRATION

The long tables and folding chairs have been cleared from the meeting hall and the floor is swept to clear the way for the dancing to come. Outside, guests and clan members compare tonight's feast of salmon, halibut, ooligan, seaweed and salmon eggs, rice, fry bread, and salmon berries with the lavish meals of the three previous evenings. Dance groups dressed in dazzling button blankets and Chilkat robes (see Figure 59) rehearse quietly in the evening shadows. Welcoming voices greet friends and relations of the four Tsimshian clans — Eagle, Wolf, Raven, and Killerwhale — who have come from British Columbian

Figure 59

The Tlingit, Haida, and Tsimshian indicate their ancestry and social identity by wearing clan crests using images of animals. These two young Tlingits perform wearing the hats, wings, and tunics of the Raven moiety and Sockeye Salmon clan. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.

homelands and U.S. cities to Metlakatla to witness tonight's memorial ceremonies. A drummer searches for her mallet, and a speaker adjusts her cedar bark hat. The copper disks attached to the hem of a young mother's ceremonial regalia jingle softly as she sways from side to side to quiet the baby perched on her hip. Latecomers are urged to look at the memorial totem pole raised during a special ceremony earlier today. Its upper portion is visible from the meeting hall steps against a background of sea, sky, and mountains. This is the last of four nights of feasting, dancing, singing, speechmaking, and gift-giving that the Tsimshian community of Metlakatla calls Potlatch '94.

Potlatch is frequently misunderstood to be simply an occasion for distribution of a deceased person's possessions. A potlatch may be that in part, but it is always much more. *Potlatch* is a Chinook word derived from the Nootka word *p'achitl*, and that translates roughly to "gift." Chinook is not really a language. It is an argot, or a specialized vocabulary, used by many different Alaskan language groups to communicate with the traders and settlers who came to Alaska in the 19th century. The word *potlatch* is now used by Natives and non-Natives for a number of different occasions that involve feasts, dances, speeches, and gifts, each of which has a specific Native-language name.

Potlatches are generally structured around specific rituals such as naming ceremonies, weddings, puberty rituals, pole raisings, or memorial ceremonies. Therefore, they function to involve entire communities in witnessing important events.

Throughout the world people recognize important milestones, or changes in status, with ceremonies. What are some of the milestones celebrated in your culture? What ceremonies and rituals are part of these celebrations?

What purpose do witnesses serve at such events? Many legal documents such as marriage certificates and wills must be signed by witnesses. Why is this important?

Historically, potlatches also served to display the material wealth of the individual host and his or her clan. By witnessing the ceremonies and accepting his or her gifts of food, clothing, carvings, or copper, the witnesses acknowledged and accepted the status of their host.

If a potlatch is an opportunity to display wealth, it is also an opportunity to share it in keeping with the most basic principle of social organization — reciprocity. Whatever one clan does for another — share food, grant hunting rights, give an honoring speech, or assist with funeral preparations — will be repaid. The goods distributed as gifts to the guests and as payment to those to whom debts are owed represent a social contract that cannot be broken without bringing dishonor to the family. In this way, material wealth is distributed among clans and communities. By honoring his guests, the potlatch host brings respect to his clan and shares his clan's good fortune with others.

Although a potlatch is usually organized around a ritual or ceremony which focuses on an individual, its function as a public forum is extremely important. The potlatch emphasizes the social impact of individual milestones. These events become part of the public record depicted in totem pole carvings and oratory. For example, when the name of a beloved leader is conferred on a designated heir, the potlatch ceremonies celebrate the heir's individual achievements and heightened status. More importantly, through speeches and dances which honor his lineage, he is publicly given notice of his inherited responsibility to behave honorably according to the ways of his people. The material wealth he inherits is not his alone; it is the clan's. The giving of gifts to the members of other clans in attendance is repayment for their assistance at the time of the deceased leader's death. That debt being publicly paid, the opposite clans are expected to acknowledge the new leader through gift-giving at potlatches they will host in the future. Thus, the potlatch affirms the clan identity of the individual and links clans through a cycle of obligation and repayment.

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Potlatches have spiritual functions as well as social ones. At Tlingit memorials, ceremonies are conducted to bring an end to the mourning period so that one's life is not "washed away with tears," making family members "vulnerable to death and the spirit world" (Dauenhauer and Dauenhauer 1990). When gifts of food, blankets, and clothing are distributed to the guests, the living are comforted and cared for by the spirit of the deceased. Through this process, the spirit of the deceased is comforted as well. The focus of the memorial is healing grief and strengthening community bonds.

A potlatch often requires years of preparation. Planning and saving for a puberty ritual, for example, begin as soon as a child is born. Food must be gathered and preserved to feed hundreds of guests. Special ceremonial robes and masks are created. Artists are commissioned to carve totem poles and paint dance screens. Drums, dance rattles, and ceremonial serving dishes are inventoried and new ones made.

Formal invitations are an important part of potlatch preparations. A century ago, a family representative paddled in a canoe to the villages of invited guests to issue invitations personally. Personal invitations are still important, but they are made via power boat, car, or ferry. Printed invitations are becoming more common.

Why is a special effort made to invite guests of high social status to a potlatch? Special guests such as government officials or celebrities are often invited to recognition ceremonies such as graduations. What does the presence of these guests mean to the honoree? To the other guests? Are you more likely to attend an event if an important person will be there?

Careful consideration must be given to gifts. In the 19th century, gifts of wool blankets from the Hudson Bay Company were common. Jewelry, carvings, and slaves were given as gifts. Bundles of food were

placed on the feasting tables for the guests to take home. Today cash is often given along with household items such as blankets, potholders, glassware, and clothing that have been purchased or made by the host family. The most lavish and costly gifts are given to guests of high rank, but each potlatch guest will receive something. Some gifts are determined at the potlatch. At Potlatch '94 a cash gift was given to a visiting dance group from Seattle when it was learned that the group needed financial support.

It is common for people who are celebrating milestones in their lives to receive gifts. Presents are given for birthdays, graduations, retirement, marriage, etc. At a potlatch, however, the honoree *gives* gifts instead of *receiving* them. Can you think of some reasons for this custom?

Potlatches are expensive, but each clan member contributes what he or she can, and creative ways are found to minimize the financial burden. For example, one family takes pledges from each member, including the children. Some estimate how much money they could save during the five-year period before the potlatch and pledge that amount toward expenses. Others pledge to provide a certain amount of meat or fish for the feast. To prepare for an upcoming potlatch, the grandchildren of a Tlingit woman living in Alaska held car washes to raise money to bring her to their home in California so that she could teach them about their roles in the ceremonies. Esther Shea, a Tlingit elder from Ketchikan, explains that children must learn the strict potlatch protocol and save and work along with the adults. Otherwise, "they are just acting, rather than participating in the meaning of the ceremonies."

In the 19th century, potlatches were held in the long, cedar plank houses where the host lived (see Figure 60). Sometimes new houses were constructed as part of the potlatch preparations. Today's pot-

Figure 60

Nineteenth-century potlatches were held in cedar plank houses similar to this model in Saxman. Photo by Donelle Blubaugh.

latches are usually held in community buildings or meeting halls. Potlatch '94 was held in a large meeting hall attached to the Metlakatla Presbyterian Church. As the invited guests enter the building, they are seated according to rank or social position. Once everyone is assembled, a formal speech of welcome is made by a person designated to be the host's speaker. This is a respected and honored position.

Oratories, or eloquent public speeches, are an important feature of potlatches. Tlingit, Haida, and Tsimshian oratory is a dynamic art form. A speaker must know family histories and relationships, the meanings of family crests and symbols seen on totem poles, masks, and blankets, and the spiritual and social traditions of the group. He or she must be able to weave history and symbols together to bring them to life for the audience. And the speaker must give the speech with the emotion and dignity appropriate to the occasion.

At a memorial, the speaker may display an object owned by the deceased person, such as a ceremonial robe or hat, to evoke the spirits of that person or his/her ancestors. The Tlingit name for these objects is *at.óow*, which translates to "the thing purchased or owned." In this

case, *thing* can refer to land, a personal name, an artistic design, a story or song about an ancestor, even the spirit of the ancestor. *Purchase* refers to what the ancestor did to acquire ownership. Ownership may be acquired through exchange of money, trade, or payment of a debt. Most often it is achieved through personal sacrifice. For example, if a person is killed by a bear, the hunter's relatives may take ownership of the bear's image in payment. The descendants of the hunter eventually inherit ownership of the image and become the caretakers of art objects, regalia, stories, and places related to the event. Thus these objects and the actions they represent become very important in the spiritual, ceremonial, and social lives of the people (Dauenhauer and Dauenhauer 1990).

In a memorial speech, the speaker skillfully uses words to bring these images to life in a way that brings comfort and peace to the mourners. An example of this is a memorial speech given by Jessie Dalton at a memorial for Jim Marks in 1968. She used a ceremonial blanket decorated with images of terns to connect the mourners with their ancestors and take away their grief. Terns are sea birds common in Southeast Alaska, and their image is the crest belonging to Jim Marks' sisters. Down is a symbol of peace used here to bring spiritual peace to the grieving.

These Terns I haven't yet explained,
yes,
these Terns.
Your fathers' sisters would fly
out over the person who is feeling grief.
Then
they would let their down fall
like snow

over the person who is feeling grief.
That's when their down
isn't felt.
That's when
I feel it's as if your fathers' sisters are flying
back to their nests
with your grief.

Another segment of her speech refers to a mask carved from cedar with an image of the sun. She evokes a natural world in which a fallen tree feels pain and the sun brings warmth and comfort.

And here,
yes,
is the one this brother of mine explained a while ago:
how that tree rolled for a while on the waves.
Then when it drifted to shore,
the sun would put its rays on it.
Yes.
It would dry its grief
to the core.
At this moment this sun is coming out over you,

my grandparents'
mask.
At this moment
my hope is that your grief
be like it's drying to your core.

From Nora Marks Dauenhauer and Richard Dauenhauer, *Haa Tuwunáagu Yís, For Healing Our Spirit* (1990).

With these words, Jessie Dalton brings the ancestral lands, the ancestors, the trees and sun into the presence of the mourners to heal their spirits and release their grief.

For an earlier activity you were asked to bring an object from home that is meaningful to you. Examine that object again, this time thinking about the action or deed you or its original owner performed to obtain it. Does the object now represent a particular feeling or emotion? If you inherited the object, does it help you remember the person who handed it down? If you were to give the object to someone who had reached an important milestone, what feelings would you want your gift to symbolize? Write a speech, essay, or poem about your object that describes those feelings.

In addition to oratory, dance is an important part of potlatch ceremonies (see Figure 61). Each of the four evenings of Potlatch '94 began with a welcome dance performed by members of that night's host clan. On the fourth night, four Eagle Clan dancers dressed in regalia decorated with the Eagle crest enacted the soaring movement of eagles in flight to the accompaniment of voices, drums, and rattles. They were soon joined by other members of the Eagle Clan, each waving a cluster of white feathers. When the dance floor was full, members of the Eagle Clan in the audience were asked to stand. Each received a feather from one of the dancers, and eventually hundreds of participants held the feathers high in celebration of their shared identity. Eventually, every guest was called to the floor through an invitational dance known as Ad'm Nak. First, guests who are married to members of the Eagle Clan were called, then those whose fathers are Eagle, and so on until each person present was recognized and given a gift.

Like oratory, dance is a way of bringing to life the history and mythology of the Southeast Coast people. Traditionally, dancing was

Figure 61

Tlingit Raven guests sing and dance during the joyous part of a potlatch held in memory of Willie Marks. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.

an important part of social activity during the winter months when people were able to rest up from the seasonal food gathering and storing activities. The Haida consider dancing a vital aspect of a happy life. At potlatches, dances are performed as gifts or payments.

Learning traditional dances is part of renewed interest in reclaiming and perpetuating knowledge of Native culture. Until recently, U.S. Government policy discouraged Native ceremonial practices, including potlatch. Today, potlatches and cultural celebrations provide opportunities for elders to train young people to participate in the social and spiritual meaning of these traditions.

TIME OUT

Plan an event to honor a special person in your life who has achieved an important milestone. That person could be a family member, a friend, or a mentor. What special guests will be invited to this event? Why? Who will be master or mistress of ceremonies? What will you do to display or symbolize this person's change in status? What foods will be served and why? What gifts will be given to each person who attends? Why are these gifts appropriate?

Present your plans to your classmates in the form of an essay or speech.

OR

Join your classmates in making plans to honor an individual whose achievements deserve special recognition. This person could be a local figure who has contributed to your community or an historical figure you admire. Do research to learn all you can about the life of this person. Plan speeches and/or skits that honor this person's contributions. Make posters or other artwork to represent his or her life. Whom will you invite to witness this celebration? Will you distribute gifts? Who will receive them?

OR

Use the following chart to compare a celebration with which you are familiar — such as Christmas, Chinese New Year, Hanukkah, or Kwaanza — to potlatch.

	Potlatch	*Other Celebration*
Significance *What is the purpose of this celebration?*		
Duration *How long does it last?*		
Invitations *Who attends and how are they invited?*		
Events *What activities are part of the celebration?* *What is their meaning?*		
Food *Are any special foods served?*		
Entertainment *Are there music, dance, stories, or other types of entertainment?*		

Much of the information and many of the activities in this section are based on materials prepared by the American Museum of Natural History in New York to accompany the exhibition "Chiefly Feasts" in 1991.

AYMARA RITUAL: CALLING THE SPIRITS

For peasant farmers in the cold, dry, Andean highlands of Bolivia and Peru, daily life is governed by natural and spiritual forces. Seasonal shifts in rainfall and temperature determine times for planting and harvest, tending and trade. The Aymara of Bolivia, like the Hopi and Southeast Alaskan Natives, believe that the deities reside both in the natural and the spirit worlds. In this region where hail, wind, and frost constantly threaten healthy crops, the deities are called upon to protect homes and crops against these threats. In Aymara communities, the agricultural cycle is accompanied by a ritual cycle that acts on the principle of reciprocity — Pachamama (Mother Earth) and Achachila (the lake and mountain spirit) feed the people when the spirits are ritually fed through ceremonies of sacrifice and respect.

These spirits are called upon daily to protect crops, bring rain, and prevent sickness. According to Tomás Huanca Laura, "every social, cultural, economic, and political event is marked by religious-ritual behavior" (in Heth 1992). While these daily invocations link routine activity and spiritual life, special fiestas occur throughout the year which involve entire communities in sacred ceremonies and celebration. Some fiestas are organized to recognize life-cycle events such as births, marriages, and house building. During these fiestas changes in status and social relationships are witnessed by the entire community. Seasonal fiestas, which have become linked to the Catholic cycle of holy days and saints' days, involve the community in honoring the spirits and enlisting their help during times of planting, maturation, and harvest of crops.

Whether fiestas are associated with the agricultural cycle or life-cycle events, they serve to reinforce cultural identity and community values. During a fiesta, the people set aside their individual concerns and take time to consider the community's connections to the spirits

Figure 62

Residents of Lakaya Baja, Bolivia, dance during fiesta celebrations in 1993. Photo by Nancy Rosoff, courtesy Smithsonian Institution.

and to nature and fulfill their sacred obligations. The farmers of the *altiplano* live in isolated family compounds rather than in village clusters. Therefore, fiestas are opportunities to visit with friends and relatives, settle disputes, and plan for community projects. Fiestas are joyous occasions. Sacred ceremonies are performed with reverent formality, but these are inevitably followed by days of feasting and dancing. The sturdy physical characteristics that give Andean people the ability to work their fields and follow their herds in the high mountain air provide the energy and endurance they need to dance for hours without stopping (see Figure 62).

Like Southeast Alaskan potlatches, fiestas require a great deal of preparation. Each fiesta is organized by a sponsor who is responsible for all expenses associated with the event. The sponsor provides the food for all the participants and arranges for dancers and musicians. Because this is an expensive undertaking, the sponsor relies on aid in the form of *ayni* (reciprocated exchange of goods and services), *apxata* (voluntary contribution of goods for a special event which incurs a reciprocal obligation), and *yanapa* (aid given to kin that does not have to be reciprocated). A person who provides aid to a fiesta sponsor can

Figure 63

expect to receive similar assistance for a future fiesta. Although sponsorship brings prestige, financial cooperation and reciprocity are the primary goals. In this way, the fiesta promotes community solidarity.

TIME OUT

What do a fiesta sponsor and a potlatch host have in common? What community values do these events promote?

The Aymara agricultural cycle is divided roughly into five types of activity coinciding with seasonal changes on the *altiplano*. Figure 63 illustrates the agricultural and seasonal cycles. Most planting is done during the dry period from August through October. Additional planting is done during the "Time of Care and Worry," when young plants require constant attention in the strong Andean sun. The months of December, January, and February usually bring the rainy season. This is the time of maturation. During this time, crops achieve their full growth and bear fruit. It is also when they are most vulnerable to sudden nighttime frosts. Harvest takes place as temperatures become con-

sistently colder in April and May. June and July bring strong, cold winds. During this time, the "Time of Selection and Interchange," food is freeze-dried and stored, trade with neighboring communities increases, and seeds are selected for the next season's planting.

TIME OUT

Design a similar chart to illustrate the agricultural and seasonal cycles for other cultures and regions you have learned about.

Each of these agricultural activities is initiated with some ceremonial event to show respect for the earth and invoke the aid of the spirits who control the forces of nature. During the rainy season, for example, a fiesta marks the time of ripening, or *maduración*. This fiesta period begins on February 2. This is the Catholic feast day known as Candlemas or the fiesta of the Virgin of Candelaria. When Christianity was introduced among the Aymara, the people expanded the idea of the Catholic Virgin to include Pachamama, or Mother Earth. Therefore, the Christian observance of the purification of Mary became a celebration of the earth and the maturing crops for the Bolivian Aymara. At the 1994 Festival of American Folklife, Manuel

Figure 64

Community ritual specialists beseech the potato spirits during a Quwachiri ritual in Lakaya Baja, Bolivia, in 1992. Photo by Nancy Rosoff, courtesy Smithsonian Institution.

Calizaya Mendoza, a raised field farmer from Tiwanaku, Bolivia, described February 2 as "the most holy day in the *altiplano.*" The fiesta lasts until Carnival, which occurs at the end of February.

The ceremonies begin with preparation of a burnt offering for the Quwachiri (kwa-chee-ree) ritual. Only Native high priests present such offerings. According to Bonifacia Quispe Fernández, an Aymara participant in the 1991 Festival, and Tomás Huanca Laura, an anthropologist, these priests are "our cultural guardians. They determine what belongs to our culture and what is intrusive, foreign. For example, sheep are not native; therefore, they are not part of our ritual culture. Llama, yes — llama is at the heart of our cultural existence" (in Winch 1994).

The offering contains various elements that are symbolic of the earth. Green coca leaves represent the growing plants. Llama fat is emblematic of the fertility of the land. Rock candies resemble the mountain peaks. These items are sprinkled with a special red wine reserved for offerings to Pachamama, combined with *copal* (resin) incense, and placed in an incense burner (see Figure 64).

As the offering burns, it is first lifted toward the sky, then it is buried in a field to symbolize the fertility the spirits bring to the land. The participants then call down the spirit of Ispallamama, the spirit of the seeds or fertility of all plants. As they move in a tight circle, dancers wave white cloths toward the sky and sing "*jawilla, jawilla,*" or "come, come," to call down the potato spirits to honor them and implore them to keep frost and hail away.

Initially only the single women dance, but later the whole community joins in. The dancers are accompanied by music from flutes, panpipes, and drums. As they dance, the members of the community pour wine on the ground, symbolically feeding Mother Earth, who feeds the people in return.

After the dance, women who have borne children go to the fields

Figure 65

Music and dance are important aspects of Andean festivals and rituals. Men from Taquile, Peru, perform with a panpipe and a goat-hide drum during the 1991 Festival of American Folklife. Photo by Richard Strauss, courtesy Smithsonian Institution.

to dig up a few potato plants. The potato plants are replaced with a large bundle of coca leaves and a quince in the hope that the potatoes will mature to large size. Ritual specialists examine the plants to predict the size of the year's crop. A few immature potatoes are also gathered. Llama fat and coca leaves are pushed into the eyes of the potatoes to make them appear very fertile and powerful. The potatoes may be dressed as if they were human relatives to show gratitude and care to the potato spirits. Again, the symbolic feeding of the potato is done to reciprocate the generosity of the spirits.

While the dances and songs for different occasions may seem quite similar to outsiders, the performers follow strict patterns that are full of symbolic meaning for the Aymara. For example, most dances follow a circular pattern, but the specific occasion — whether the dance

is for planting or harvest, for example — determines whether the dancers will move in a clockwise or counterclockwise direction. The songs sung at the time of planting are sung at a higher pitch than those performed at the time of harvest.

Music and dance are important aspects of all Andean festivals and rituals. Every occasion has specific songs and dances that serve as a way of communicating directly with the spirits. Dances are also performed as dramas that reenact historical events and stories of the spirit world. Musicians and dancers are honored members of Andean communities, and their work is viewed as an important contribution to the well-being of the people (see Figure 65).

TIME OUT

The rituals and ceremonies of any culture are one way that group traditions are preserved. Rituals and ceremonies also function to acknowledge social change. For example, Aymara ceremonies and rituals are based on ancient traditions, but they also incorporate some of the Christian observances of Spanish missionaries and settlers. Do some research to find out how a ritual or ceremony observed in your family or community has changed over time. What caused these changes? Your librarian can help you find information about the history of holiday celebrations such as Valentine's Day or Kwaanza and milestone ceremonies such as weddings and funerals.

OR

Traditional Andean music is becoming more popular in the United States. Listen to recordings of traditional Andean music. Prepare an audio presentation for your class in which you introduce traditional Andean songs. Your music teacher may be able to help you locate Andean instruments such as the panpipe, wooden flute, or goat-hide drum that you can use as part of your demonstration. The recordings listed below will help you get started:

Anthology of Central and South American Indian Music
Smithsonian Folkways #4542 (2 cassettes)
Smithsonian Folkways
414 Hungerford Dr., Suite 444
Rockville, MD 20850

Creation's Journey: Native American Music Presented by the National Museum of the American Indian
Smithsonian Folkways #SF 40410 (cassette or CD)

Mountain Music of Peru, Vol. 1
Smithsonian Folkways #SF 40020 (cassette or CD)
Mountain Music of Peru, Vol. 2
Smithsonian Folkways #SF 40406 (cassette or CD)

OR

There may by civic or religious organizations in your community that are aware of Andean immigrants living in your community. By contacting these groups you may find Andean musicians who are eager to perform for your class.

THE HOPI CEREMONIAL CYCLE

Hopi ritual life revolves around a series of ceremonies which occur throughout the year. Like many Aymara fiestas, these ceremonies overlap the agricultural cycle and are performed to bring rain and fertility to the crops. The ceremonies also enact the emergence of the Hopi people into the Fourth World and reinforce their role as caretakers of the earth.

The Hopi have fought hard to retain the right to practice their religion without interference from outsiders. In the past, traditional ceremonies were banned by Christian missionaries and government officials. Hopi were physically punished for practicing their religion and speaking their language. Children sent to government boarding schools far from home were forced to learn Christian doctrine. Leigh Jenkins, director of the Hopi Cultural Preservation Office, remembers the pain of being forced to "choose" a Christian sect on the enrollment forms for a residential school he attended. He was confused because "Hopi was not even an option."

TIME OUT

What do you suppose government and religious agencies hoped to accomplish by banning Native American religious practices such as potlatch and Hopi ceremonies? Discuss how you think these cultures have been affected by these policies.

In recent years, the Hopi have grown wary of tourists and other outsiders who have disrupted ceremonies with noise, video equipment, and recorders. It is not surprising, then, that today the Hopi have closed most of their ceremonies to outsiders.

Another reason many of the ceremonies are private is that they serve as initiation rituals. Initiations are performed when a person demonstrates through his or her achievements that special status and recognition are deserved. Children participate in ceremonies in limited ways until they are old enough to fully understand Hopi traditions, beliefs, and responsibilities. As they mature in skill and knowledge, they will be included in adult activities and given opportunities to earn positions in a number of religious and social groups.

Throughout their adult lives, the spiritual achievements of Hopi men and women are recognized in initiations that empower them with increasing respect and authority. By keeping these ceremonies private, the Hopi make sure that those who participate understand their sacred meaning.

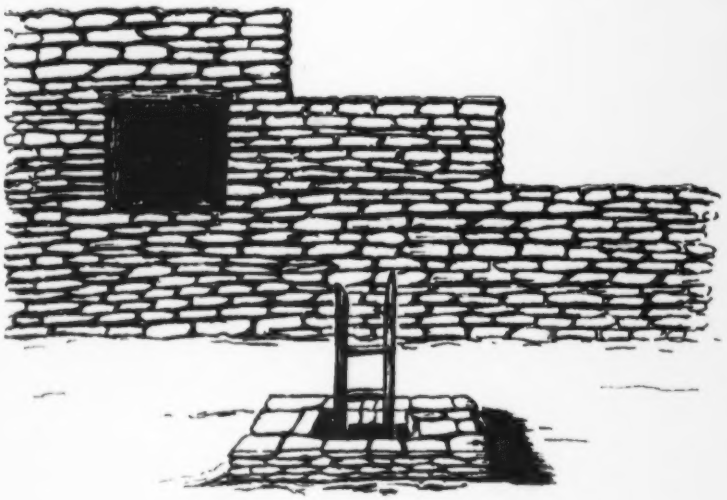
TIME OUT

Can you think of any groups that require prospective members to prove knowledge and skill? Are there specific age or training requirements? Why are such requirements important? Do these groups hold ceremonies for initiates?

The Hopi ceremonial cycle is an annual reenactment of the people's relationship with their deities and the land. It reinforces social structures and gives ceremonial significance to values of interdependence, reciprocity, and respect that are central to Hopi daily life. The descriptions below give general information about several ceremonies without pro-

Figure 66

Many Hopi ceremonies are performed in kivas, *underground ceremonial chambers. Think about what you have learned about Hopi beliefs. What is the significance of conducting ceremonies below ground?*



viding details that interfere with the religious training young people receive from the initiated adults in their communities.

The first ceremony of the ritual cycle is Wuwuchim. This ceremony takes place in November and is dedicated to Masauwu, the caretaker of this world who promised the Hopi that he would provide for them if they followed his instructions. According to Hopi tradition, Masauwu derives his power from the sun and projects its warmth to the earth, thereby germinating the seeds that lie below the soil. Many Hopi ceremonies are conducted in underground ceremonial chambers called *kivas* (see Figure 66).

The second winter ceremony is Soyal, among the most important ceremonies in the cycle. It takes place at the time of the winter solstice in December. The sun has reached the end of its southward journey and is ready to return to the Hopi world, giving strength and warmth to the people and their crops. Soyal marks the first appearance of the Kachinas (spirits), who are present among the Hopi for six months of the year. The Soyal Kachina (see Figure 67), dressed in a turquoise helmet (which represents his emergence from the Southwest) and a white cotton blanket, wobbles unsteadily through the village mimick-

ing the steps of a child learning to walk. This performance represents new life coming to the Hopi mesas with the end of winter. Mastop Kachina (see Figure 68) represents male fertility. His black mask signals his journey from above, and the bag of cornmeal he carries is a symbol of fertility.

TIME OUT

Throughout the world, cultures conduct special ceremonies during the winter solstice. Like Christmas and Hanukkah, many have origins connected to the end of darkness and the return of life-giving light. What significance does the winter solstice have for other cultures?

During Soyal, the patterns of Hopi life for the coming year are laid out in the *kiva*. The solemn ceremonies performed at the *kiva* altars eventually give way to entertaining dances and dramas performed in the village plazas. Dancers tease the members of the audience and give gifts of watermelon and sweet corn to the children.

The final activity of this three-week-long ceremony is also lighthearted. Women emerge from their homes and throw water on the men to bring snow and rain to moisten the crops that will be planted in the early spring. Then *somiviki*, sweet blue cornmeal tied in cornhusk packages, is distributed to everyone as a final wish for bounty and happiness.

February brings the final winter ceremony, Powamu. Bean plants are distributed to each household by the Kachinas. Ceremonial activity decreases during the busy planting months of March, April, and May, but the Kachinas are still present in the Hopi world. Later, during the July Niman ceremony, the people will reciprocate the Kachinas' February gifts by giving the Kachinas the first harvest from the ripening fields. The Kachinas then return to their home in the underworld.

There are several hundred Kachinas recognized by the Hopi. In addition to their symbolic function at ceremonies, they are involved in the discipline of children. During Powamu, for example, Kachinas

Figure 67

The Soyal, or Solstice, Kachina brings new life to the Hopi mesas at winter's end.

Figure 68

Mastop Kachina's black mask signals his journey from above. He carries a bag of cornmeal as a symbol of fertility.

visit children who have misbehaved to scold and threaten them. The children offer gifts to the spirits and make promises to behave in the future. The Kachina dances are opportunities for young people to learn about the expectations of their elders and their responsibilities to the community.

Like Andean and Southeast Alaskan ceremonies, these Hopi rituals require extensive preparation on the part of the clan leaders who organize them. For Niman, for example, relatives clean and paint the leader's house. The daughters-in-law and nieces make huge pots of sweet corn pudding. Corn is ground for *piki* bread and for ceremonial use weeks in advance.

The ceremonies also bring relatives who live far away back to the mesas to participate. These ceremonies preserve and renew the meaning of Hopi life. They dramatically intertwine the agricultural and spiritual identity of the people and renew the covenant Masauwu made at the time of emergence:

My life is simple.
All I have is my planting stick and my corn.

If you are willing to live as I do
and follow my instructions,
the life plan which I shall give you,
you may live here and take care of the land.

Then you shall have a long, happy, fruitful life.

From *Hopi Prophecy* (1995).

Hopi, Aymara, and Southeast Alaskan Native ceremonies are closely related to each group's subsistence practices. How are subsistence foods used in these ceremonies?

Anthropologists, folklorists, and other scholars study the rituals and ceremonies of cultural groups to learn about the values and beliefs of those groups. According to the descriptions above, what are some of the values that Hopi, Andean, and Southeast Alaskan Natives share? What beliefs are unique to each group?

Suggested Resources

General

Native American Dance: Ceremonies and Social Traditions, ed. Charlotte Heth (Washington, D.C.: Smithsonian Institution Press/National Museum of the American Indian, 1992). This lavishly illustrated book contains a series of essays which explore the enduring importance of music and dance in Native life. It is an excellent resource for learning about the relationships among aspects of spiritual, material, and artistic culture.

Hopi Ritual and Ceremony

Hopi Kachinas (New York: National Museum of the American Indian, 1971). The illustrations by Edwin Earle and text by Edward A. Kennard provide information about the Hopi ritual cycle and the role of Kachinas in Hopi life.

Southeast Alaskan Oratory and Potlatch

Haa Tuwunáagu Yís, For Healing Our Spirit: Tlingit Oratory, ed. Nora Marks Dauenhauer and Richard Dauenhauer (Seattle: University of Washington Press, 1990). This is a detailed examination of Tlingit memorial or potlatch traditions. Students will be interested in seeing the Tlingit-language texts of memorial oratories with English translations on facing pages.

Videotaped highlights of Celebration, the biennial gathering of Tlingit, Haida, and Tsimshian dance groups in Juneau, Alaska, are available from the Sealaska Heritage Foundation, One Sealaska Plaza, Suite 201, Juneau, Alaska 99801 (Tel. 907-463-4884).

Andean Dance and Music

See "The Fiesta: Rhythm of Life in the Sierras of Mexico and the Altiplano of Bolivia" by Nancy Rosoff and Olivia Cadaval in *Native American Dance: Ceremonies and Social Traditions*, cited above.

STEWARDSHIP & RECIPROCITY

Suggested Activities

Think about the idea of reciprocity. For many Native American groups, reciprocal giving is a way of maintaining balance between the natural and spirit worlds for the good of the community and the environment. How is this concept demonstrated in each group's subsistence practices? Artistic efforts? Stories? Rituals and ceremonies?

One of the goals of the 1991 Festival of American Folklife was to demonstrate how Native American knowledge of the land is a powerful force in sustaining the environments in which the people live and in maintaining self-sufficiency and cultural identity. The farmers, potters, weavers, carvers, musicians, dancers, and storytellers who participated in the Festival are never distant in their thoughts or actions from the land. Most see stewardship of the earth as a responsibility inherited from the ancestors and as an investment for future generations. Can you think of ways this attitude can be applied in your life? In your community? Have any of your attitudes about your responsibilities changed as you have learned about Native American ways of viewing the world? Has your understanding of how other people live and work changed?

With your classmates, create a list of the beliefs, values, and actions you have learned about during your study of Native American cultures. Then choose one of the following activities (or design one of

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your own!) to demonstrate your understanding of Native American perspectives on the natural world.

- Use your artistic skills to design a poster that illustrates the relationship between humans and the earth.
- Write and illustrate a children's story to teach about the importance of using the earth's resources with care and respect.
- Plan a ceremony in connection with the season of planting or harvesting in the region where you live.
- Write and perform a skit to call attention to a local environmental issue.
- Write a letter to a state or local official to suggest ways to treat natural resources.
- Choreograph and perform a dance to illustrate an environmental theme.
- Plant an indoor or outdoor garden. Keep a journal of what you do to care for the garden and how the plants change with the seasons.
- Write a poem in honor of the First People of the Americas.
- Research the subsistence practices of an indigenous culture in another region of the world. How do these practices compare to those of Native Americans?
- Keep a detailed log of the food you eat for one week. How much of that food comes from crops native to the Americas?
- Find out about political and environmental issues that are of concern to Native Americans living in your area. Learn as much as you can about how the traditions and beliefs of these groups influence their point of view. Write an article for your school or local newspaper to explain the issue and Native American perspectives.

RESOURCES

WORKS CONSULTED

American Museum of Natural History. "Chiefly Feasts" and "The Treasures of Siwidi," educational activities created for the exhibition "Chiefly Feasts," 1991.

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Fini, M. S. *The Weavers of Ancient Peru.* London: Tumi, 1985.

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Hall, Betty. *Totemic Design Forms.* Ketchikan, Alaska: Betty's Rainbow Press, 1994.

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Books

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Bastien, Joseph W. *Mountain of the Condor.* St. Paul: West Publishing Co., 1978. Bastien lived among the Aymara of Kaata, Bolivia, for one year. His book describes the Aymara people through examination of the religious symbols and metaphors that govern daily and ritual life. While Bastien observes life in Kaata as an anthropologist, his account is personalized and affectionate. Older students will enjoy excerpts that give names and faces to the people of the *altiplano.*

Berger, Thomas R. *A Long and Terrible Shadow: White Values, Native Rights in the Americas, 1492-1992.* Seattle: University of Washington Press, 1991. For teachers and older students interested in the social and political history of Native Americans since the European encounter. Berger is a British Columbia lawyer specializing in Native rights. This survey looks at the moral and legal questions raised by European-American domination of Native lands and people.

Bigelow, Bill, and Barbara Miner et al., eds. *Rethinking Columbus: Teaching About the 500th Anniversary of Columbus's Arrival in America.* Milwaukee: Rethinking Schools, 1991. This special edition of the quarterly *Rethinking Schools* is a collection of essays, interviews, poems, and stories designed to counter Eurocentric thinking about the impact of the arrival of Europeans in the Americas. The perspectives of many Native American cultures are represented. The publication includes an excellent list of teaching resources.

Blackman, Margaret B. *During My Time.* Seattle: University of Washington Press, 1982. The life history of Florence Davidson, a Haida woman born in 1896. Davidson's narrative, along with Blackman's commentary, provides readable insight into changes in Haida culture over the past 100 years.

Borden, Carla, and Peter Seitel, eds. *1994 Festival of American Folklife.* Washington, D.C.: Smithsonian Institution, 1994. The program book for the 1994 Festival of American Folklife in Washington, D.C., gathers essays on the relationship between culture and development in Latin America and other regions.

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_____. *Keepers of Life: Discovering Plants Through Native American Stories.* Golden, Colorado: Fulcrum Publishing, 1994.

_____. *Keepers of the Night: Native American Stories and Nocturnal Activities for Children.* Golden, Colorado: Fulcrum Publishing, 1994. These stories feature the night sky and nocturnal animals. Activities include nature studies, games, and building campsites. Each of the Caduto/Bruchac books contains helpful information about teaching about Native cultures with respect and appreciation.

Carlson, Laurie. *Ecoart! Earth-Friendly Art & Craft Experiences for 3- to 9-Year-Olds.* Charlotte, Vermont: Williamson Publishing, 1993. Although these activities were created for young children, many are appropriate for any age. Secondary students could also use the book as a resource for planning a special project such as an Earth Day curriculum for elementary students.

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Eastman, Carol M., and Elizabeth A. Edwards. *Gyaehlingaay: Traditions, Tales, and Images of the Kaigani Haida.* Seattle: Burke Museum Publications,

1991. Eleven traditional Haida tales presented in English and Kaigani Haida. The authors discuss the background of each story.

Erdoes, Richard, and Alfonso Ortiz, eds. *American Indian Myths and Legends.* New York: Pantheon, 1984. A broad collection of North American Native tales.

Fini, M. S. *The Weavers of Ancient Peru.* London: Tumi, 1985. This introduction to Peruvian textile arts contains excellent photographs and illustrations of the weavers' work.

Hall, Betty. *Totemic Design Forms.* Ketchikan, Alaska: Betty's Rainbow Press, 1994. An introduction to the basic lines and animal forms that are seen on traditional totem poles. Figures are presented as they appear on carvings, appliqués, and paintings. Available from publisher at 5646 South Tongass Highway, Ketchikan, Alaska 99901.

Heth, Charlotte, ed. *Native American Dance: Ceremonies and Social Traditions.* Washington, D.C.: Smithsonian Institution Press/National Museum of the American Indian, 1992. This lavishly illustrated book contains a series of essays which explore the enduring importance of music and dance in Native life. It is an excellent resource for learning about the relationships among aspects of spiritual, material, and artistic culture.

James, Harry C. *Pages from Hopi History.* Tucson: University of Arizona Press, 1974. An accessible history of the Hopi people from emergence through recent times.

Kavena, Juanita Tiger. *Hopi Cookery.* Tucson: University of Arizona Press, 1980. This collection of Hopi recipes incorporates anecdotes and reflections about Hopi foodways.

Kirk, Ruth. *Tradition & Change on the Northwest Coast.* Seattle: University of Washington Press, 1986. This book describes the history and culture of four Native groups from coastal British Columbia — the Makh, Nuu-chah-nulth, Southern Kwakiutl, and Nuxalk — who share many traditions and practices with Southeast Alaskan Native people. First-person accounts, traditional narratives, and photographs accompany Kirk's insightful descriptions of life long ago and today.

Miller, Jay. *Earthmaker. Tribal Stories from Native North America.* New York: Putnam, 1992. Introductory information discusses Native culture in several North American regions and common themes and motifs found in the stories.

Olson, Wallace M. *The Tlingit: An Introduction to their Culture and History.* Auke Bay: Alaska, Heritage Research, 1991. Describes Tlingit history, social organization, subsistence practices, language, and art. Olson's explanation of clan relationships is particularly useful.

Seitel, Peter, ed. *1991 Festival of American Folklife.* Washington, D.C.: Smithsonian Institution, 1991. The program book for the 1991 Festival of American Folklife includes essays about the concept of land in Native American cultures.

Sekaquaptewa, Helen (as told to Louise Udall). *Me and Mine.* Tucson: University of Arizona Press, 1969. This life story of a Hopi woman provides a first-person view of Hopi daily life, tradition, and change.

Stewart, Hilary. *Cedar: Tree of Life to the Northwest Coast Indians.* Seattle: University of Washington Press, 1984. Stewart describes the amazing role of cedar in the lives of Northwest Coast Natives. Her photographs and detailed drawings illustrate the use of cedar as raw material for shelter, clothing, transportation, art, and ceremonial objects. Her focus on diverse uses of a single resource is an excellent resource for helping students understand the concept of subsistence.

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Tripp, Angela, ed. *Alaskan Native Cultures: Tlingit, Haida, Tsimshian, Volume 1.* Santa Barbara, CA: Albion Publishing Group, 1994. This book, through text and beautiful color photographs, celebrates a renewal of interest in traditional dance, art, and ceremonies among Tlingit, Haida, and Tsimshian people of all ages. An excellent source of visual information for students.

Viola, Herman J., and Carolyn Margolis, eds. *Seeds of Change: A Quincentennial Commemoration.* Washington, D.C.: Smithsonian Institution Press, 1991. Examines the dramatic economic, cultural, and biological changes that occurred throughout the world as a result of European contact with the First Americans. Contains excellent essays on pre-contact Native culture and the adoption of Native American food crops throughout the world.

Weatherford, Jack. *Indian Givers: How the Indians of the Americas Transformed the World.* New York: Fawcett, 1989. Recounts a number of innovations "given" to Europeans by Native Americans. A companion book is *Native Roots: How the Indians Enriched America.* New York: Crown, 1991.

Wood, Marion. Illustrations by John Sibbick and Bill Donohoe. *Spirits, Heroes & Hunters from North American Indian Mythology.* New York: Peter Bedrick Books, 1992. A beautifully illustrated book that older students will appreciate. A useful explanation of the Native American symbols and objects appearing in the book's illustrations is included.

Wycoff, Lydia. *Designs and Factions: Politics, Religion, and Ceramics on the Hopi Third Mesa.* Albuquerque: University of New Mexico Press, 1985. This study examines the historical, environmental, and cultural forces that contribute to the techniques and motifs used by Third Mesa potters.

All Roads Are Good: Native Voices on Life and Culture and *Creation's Journey: Native American Identity and Belief.* Washington, D.C.: Smithsonian Institution Press/National Museum of the American Indian, 1994. Both books accompany exhibitions at the National Museum of the American Indian. Each book contains color reproductions of Native American arts and

crafts and the commentary of Native Americans on the cultural significance of objects included in the exhibitions.

Dover Publications, Inc., produces a number of inexpensive booklets containing designs from many Native American cultures that are useful for student art projects. Consult your bookseller.

Audio/Video

Hopi: Songs of the Fourth World, a film by Pat Ferrero. Available from New Day Film Co-Op, Inc., 22-D Hollywood Avenue, Hohokus, New Jersey 07423 (Tel. 201-652-6590). This award-winning video is a portrait of Hopi people, land, and values. It examines the central role of corn and the land in the spiritual, artistic, and agricultural lives of the Hopi. A resource handbook is also available.

The Hopi is a 20-minute video from the American Indian Video Series by the Museum of Northern Arizona. Scenes of family life and work are accompanied by traditional music and straightforward narration. This video as well as books and recordings are available from the Hopi Arts and Crafts Cooperative Guild, P.O. Box 37, Second Mesa, Arizona 86043 (Tel. 602-734-2463).

Masayesva, Victor. Masayesva is a Hopi artist whose videos incorporate computer animation and graphics to translate Hopi myths, rituals, and history. Five productions, *Hopiit; Itam Hakim, Hopiit; Ritual Clowns; Pot Starr;* and *Siskyavi-The Place of Chasms*, are available from Electronic Arts Intermix, 536 Broadway, 9th Floor, New York, NY 10012 (Tel. 212-966-4605, FAX 212-941-6118).

A Matter of Respect, produced by Ellen Frankenstein (1992), a video available from New Day Films, Inc. (see *Hopi: Songs of the Fourth World* above), focuses on the subsistence practices of the Tlingit people. Elders and young people discuss efforts to preserve traditional ways in a changing economic and environmental landscape.

Videotaped highlights of Celebration, the biennial gathering of Tlingit, Haida, and Tsimshian dance groups in Juneau, Alaska, are available from the Sealaska Heritage Foundation, One Sealaska Plaza, Suite 201, Juneau, Alaska 99801 (Tel. 907-463-4884).

The Box of Daylight, produced by Pacific Communications & Marketing, 1990. This 8 1/2-minute VHS recording presents Tlingit art and mythology in a dramatic performance of a creation story featuring Raven, the Trickster. Available from the Sealaska Foundation (see address above).

Many recordings of Native American music, including Hopi, Andean, and Southeast Alaskan Native collections, are available from Smithsonian Folkways Recordings. To receive a catalogue call: (202) 287-3262. Spoken-word recordings are also available.

Organizations

Inter-American Foundation. The Inter-American Foundation provides direct financial support for self-help efforts initiated by poor people in Latin America

and the Caribbean. Its journal, *Grassroots Development*, reports on these efforts. For a free subscription to the journal, write to: *Grassroots Development*, Inter-American Foundation, 901 N. Stuart Street, 10th Floor, Arlington, Virginia 22203.

Ketchikan Museums. The Ketchikan Museums in Ketchikan, Alaska, sponsor exhibitions and educational programs in two museums, the Tongass Historical Museum and Totem Heritage Center. The Historical Museum's collection focuses on the daily lives of the Natives and later settlers of the area. The Totem Heritage Center houses a collection of totem poles dating from the 19th century. The Heritage Center's Native Arts Studies Program has been instrumental in bringing master carvers, regalia makers, drum makers, basket weavers, and other artists together with Native children and adults who want to learn traditional crafts. *Coastal Crossings* is a bimonthly newsletter published by the Ketchikan Museums on Northwest Coast Native art and culture. Contact: *Coastal Crossings*, Ketchikan Museums, Totem Heritage Center, 629 Dock Street, Ketchikan, Alaska 99901 (Tel. 907-225-5900).

Network of Educators on the Americas (NECA). This nonprofit organization of K-12 teachers, parents, and community members develops and promotes teaching methods and resources for social and economic justice in the Americas. NECA has produced guides for teaching about Latin America and the Caribbean. It also distributes publications related to multicultural and anti-bias education. *Teaching for Change* is NECA's quarterly newsletter. Contact: NECA, P.O. Box 73038, Washington, DC 20056 (Tel. 202-806-7277).

Sealaska Heritage Foundation. This foundation works to support and promote the heritage and culture of the Tlingit, Tsimshian, and Haida people. It distributes books and videos and publishes a quarterly newsletter, *Naa Kaani*. Contact: Sealaska Heritage Foundation, One Sealaska Plaza, Suite 201, Juneau, Alaska 99801 (Tel. 907-463-4844).

Native Seed/SEARCH (NSS). This organization works to conserve Native crop heritage and Native culture in the American Southwest. Contact: NSS, 2509 N. Campbell Avenue, #325, Tucson, Arizona 85719.

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SLIDE SET

1. The 1991 Festival of American Folklife: A group of Aymara musicians and dancers from the Lake Titicaca region in the highlands of Bolivia perform a traditional ceremonial dance. Photo courtesy Smithsonian Institution.

2. Hopi landscape: The Hopi live in the high, arid desert of Arizona. Photo by Donelle Blubaugh.

3. Andean landscape: The Bolivian highlands around Lake Titicaca have a distinctive ecosystem. Photo by Nancy Rosoff, courtesy Smithsonian Institution.

4. Southeast Alaska landscape: The Southeast Alaska region is a temperate rainforest. Photo by Donelle Blubaugh.

5. Hopi corn field: The Hopi developed special farming techniques suitable to the unique conditions of their environment. Photo courtesy Smithsonian Institution.

6. Corn products: All of these household items contain corn products. Photo by Jym Wilson.

7. Tiwanaku ruins: The ancient city of Tiwanaku was once the religious and economic center of a civilization that included portions of what is now Peru, Argentina, Chile, and Bolivia. Photo by Pete Reiniger, courtesy Smithsonian Institution.

8. Ancient fields: Archeologists can see evidence of long-forgotten farming techniques in the patterned ridges in the Lake Titicaca basin. Photo by Oswaldo Rivera Sundt, courtesy Smithsonian Institution.

9. Community farming: In the highlands of Lake Titicaca, Bolivia, Aymara community members work together to reconstruct an ancient field. Photo by Alan Kolata, courtesy Smithsonian Institution.

10. Taquile weavers: Quechua weavers work together on a loom on the island of Taquile in the Peruvian side of Lake Titicaca. Photo by Elayne Zorn.

11. Taquile feast: Quechua participants from the island of Taquile host a traditional feast for Andean participants from Bolivia at the 1991 Festival of American Folklife. Photo courtesy Smithsonian Institution.

12. Community ritual ceremony: Community ritual specialists beseech the spirits during a Quwachiri ritual in Lakaya Baja, Bolivia. Photo by Nancy Rosoff, courtesy Smithsonian Institution.

13. Pole raising: Raising a totem pole in Southeast Alaska involves the entire community. Photo by Donelle Blubaugh.

14. Totem pole carving: Nathan Jackson demonstrates totem carving techniques during the 1991 Festival of American Folklife. Photo courtesy Smithsonian Institution.

15. Salmon fishing: Nora Dauenhauer, a Tlingit cultural specialist from Juneau, Southeast Alaska, fillets salmon. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.

16. Potlatch: Members of the Tlingit community in Southeast Alaska participate in a potlatch ceremony. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.

17. Hopi pottery: Tessa Taylor uses sandpaper to smooth her pots while her teacher and grandmother, Lucille Namoki, sits nearby. Photo by Donelle Blubaugh.

18. Aymara celebration: Community members of Lakaya Baja, Bolivia, dance during a ceremonial feast. Photo by Nancy Rosoff, courtesy Smithsonian Institution.

19. Seaweed harvest: Nora Dauenhauer sorts seaweed with a friend near her home in Southeast Alaska. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.

20. Southeast Alaskan dances: Southeast Alaskan children participate in traditional ceremonial dances. Photo by Richard Dauenhauer, courtesy Smithsonian Institution.